PB-216 465

WATER POLLUTION CONTROL RESEARCH AND TRAINING GRANTS. 1966 GRANTS AWARDS: RESEARCH GRANTS, RESEARCH FELLOWSHIPS, TRAINING GRANTS, DEMONSTRATION GRANTS

Federal Water Pollution Control Administration
Washington, D. C.

1966

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Water Pollution Control Research and Training Grants

1966 Grant Awards

RESEARCH GRANTS
RESEARCH FELLOWSHIPS
TRAINING GRANTS
DEMONSTRATION GRANTS

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U.S. DEPARTMENT OF THE INTERIOR
Federal Water Pollution Control Administration

Water Pollution Control Research and Training Grants

1966 Grant Awards

RESEARCH GRANTS

DEMONSTRATION GRANTS

TRAINING GRANTS

RESEARCH FELLOWSHIPS

FEDERAL WATER POLLUTION CONTROL ADMINISTRATION
Division of Research and Training Grants
Washington, D. C. 20242

DISCRIMINATION PROHIBITED--Title VI of the Civil Rights Act of 1964 states: "No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subject to discrimination under any program or activity receiving Federal financial assistance." Therefore, the Division of Research and Training Grants of the Federal Water Pollution Control Administration, like every program or activity receiving financial assistance from the Department of the Interior, must be operated in compliance with this law.

FOREWORD

The Federal Water Pollution Control Act authorizes the award of grants-in-aid for research, demonstration, and training projects, and for research fellowships.

The purposes of these grants are to encourage, cooperate with, and assist appropriate agencies, institutions, and individuals in the conduct of studies and training relating to the causes, control and prevention of water pollution.

Support is available for projects and fellowships designed to improve the quality of water, and to conserve water for public water supplies, propagation of fish and aquatic life and wildlife, recreational purposes, agricultural, industrial, and other legitimate uses. Four types of grants are available.

Research Grants are awarded to grantees for the conduct of basic and applied research projects in water supply and pollution control. Projects supported by these grants are intended to discover, develop, or confirm information, to expand such research activities throughout the Nation, and to encourage investigators to undertake research in neglected areas.

Demonstration Grants are awarded to public and private institutions and agencies to support investigations and studies of an applied nature, and to demonstrate the feasibility of new methods. These grants are designed to evaluate the application of research findings, and to expedite incorporation of new knowledge into routine water supply and pollution control practice.

Training Grants are awarded to institutions to establish or expand training in water supply and pollution control. The grants provide funds to support graduate train[illegible] programs in a variety of departments, including expansion and improvement of faculties, and trainee stipends for students participating in the training program. The purpose is to increase the resource of professional manpower.

Research Fellowships are awarded to individuals for the support of specialized research training in the institution of their choice. The purpose is to increase the number of scientists qualified to carry on independent research in water supply and pollution control.

Application: To obtain details concerning the various awards and to request forms for the submission of applications, write to:

Division of Research and Training Grants
Federal Water Pollution Control Administration
633 Indiana Avenue, N.W.
Washington, D. C. 20242

WATER POLLUTION CONTROL

RESEARCH AND TRAINING GRANTS

LIST OF 1966 AWARDS

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WATER POLLUTION CONTROL

RESEARCH AND TRAINING GRANT PROGRAM

SUMMARY OF AWARDS

FISCAL YEAR 1966

Grants	Number States	Number Institutions	Grants Awarded	Amount Awarded
Research Grants	40	116	269	$6,044,998
Demonstration Grants	24	41	42	2,164,656
Training Grants	36	51	65	2,499,998
Research Fellowships	28	41	113	709,999
ALL GRANTS	45	162	489	$11,419,651

WATER POLLUTION CONTROL

RESEARCH GRANTS FISCAL YEAR 1966

SUMMARY OF GRANT AWARDS BY STATES

State	Institutions and Agencies	Number Awarded	Amount Awarded
Alabama	2	2	$ 39,996
Alaska	1	1	32,321
Arizona	1	3	38,507
Arkansas	1	1	18,407
California	12	30	683,406
Colorado	2	3	58,408
Connecticut	1	2	29,313
District of Columbia	2	2	49,237
Florida	4	12	271,424
Georgia	2	4	54,684
Illinois	4	13	248,855
Indiana	2	2	30,051
Iowa	2	3	70,170
Kansas	3	5	45,172
Louisiana	1	1	13,256
Maine	2	3	64,976
Maryland	2	4	81,273
Massachusetts	4	10	323,254
Michigan	2	11	589,793
Minnesota	2	6	155,687
Missouri	2	4	112,959
Montana	2	4	70,013
New Hampshire	1	1	41,752
New Jersey	2	6	68,004
New Mexico	2	3	48,819
New York	11	27	576,581
North Carolina	3	6	149,096
Ohio	5	10	182,185
Oklahoma	2	4	89,244
Oregon	1	15	309,550
Pennsylvania	8	9	287,947
Rhode Island	1	3	75,967
South Carolina	2	4	114,127
Tennessee	2	4	72,386
Texas	6	13	218,458
Utah	2	3	28,137
Virginia	1	1	15,417
Washington	2	17	427,421
West Virginia	1	2	28,050
Wisconsin	2	7	154,440
Foreign	6	6	76,255
40 States	116	269	$6,044,998

Active Research Grants 1966

42 States, 7 Foreign Countries
126 Institutions and Agencies
330 Research Grants

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WATER POLLUTION CONTROL

RESEARCH GRANTS

FISCAL YEAR 1966

LOCATION AND INVESTIGATOR	PROJECT TITLE	GRANT NO.	AMOUNT
ALABAMA			
Auburn University Auburn			
Funderburk, H. Hanly, Jr., Ph.D. Dept. of Botany and Plant Pathology	Effect of Herbicides on an Aquatic Environment	WP-00636-03	$ 23,136
University of Alabama University			
Walters, James V., Ph.D. Dept. of Civil Engineering	Nematodes in Sewage and Sewage Treatment Facilities	WP-00055-03	16,860
ALASKA			
University of Alaska College			
Dugdale, Richard C., Ph.D. Institute of Marine Science	Dynamics of the Nitrogen Cycle in Lakes	WP-00422-04	32,321
ARIZONA			
University of Arizona Tucson			
Bier, Milan, Ph.D. Dept. of Agriculture	Water Purification by Large Scale Electrophoresis	WP-00785-02	16,914
Croft, A. Russell, M.S. Dept. of Watershed Management	Rainstorm Debris Floods and their Relation to the Public Health	WP-00953-01	13,410
McIntosh, Thomas H., Ph.D. Dept. of Agricultural Chemistry and Soils	Biological Effect of Waste Water on Soil Surfaces	WP-00672-03	8,183

LOCATION AND INVESTIGATOR	PROJECT TITLE	GRANT NO.	AMOUNT
ARKANSAS			
University of Arkansas Fayetteville			
Testerman, Maurice K., Ph.D. Dept. of Electronics and Instrumentation	A Continuous Multiparameter Water Quality Monitor	WP-00044-05	$ 18,406
CALIFORNIA			
California Institute of Technology Pasadena			
Brooks, Norman H., Ph.D. William M. Keck Laboratory	Dynamics of Density-Stratified Groundwater Flow	WP-00680-03	23,458
Brooks, Norman H., Ph.D. Div. of Engineering and Applied Science	Dynamics of Density-Stratified Reservoirs	WP-00428-03	_____*
McKee, Jack E., Sc.D. Dept. of Environmental Health and Engineering	Mycological Phenomena in Sewage Spreading Basins	WP-00988-01	22,713
Morgan, James J., Ph.D. Div. of Engineering and Applied Science	Flocculation Behavior of Dilute Clay-Polymer Systems	WP-00942-01 WP-00942-02	15,040 23,490
Morgan, James J., Ph.D. Div. of Engineering and Applied Science	The Chemistry of Manganese in Natural Waters	WP-00941-01	14,820
North, Wheeler J., Ph.D. Div. of Engineering and Applied Science	Marine Waste Disposal and Sea Urchin Ecology	WP-00697-02	20,107
Long Beach, State College Fdn. Long Beach			
Reish, Donald J., Ph.D. Dept. of Biology	Studies on Indicator Species of Marine Pollution	WP-00531-03	10,285
Los Angeles State College Fdn. Los Angeles			
Anderson, Dean A., Ph.D. Dept. of Microbiology and Public Health	Bacteriology of Biodegradable Surfactants	WP-00961-01	8,727

* Active 1966 - Supported by funds awarded in previous years

LOCATION AND INVESTIGATOR	PROJECT TITLE	GRANT NO.	AMOUNT
CALIFORNIA (cont.)			
Ludwig Engineering and Science Research Fdn., Arcadia			
Ludwig, Harvey F., M.S. Dept. of Sanitary Engineering	Floc Strength and Filterability of Pretreated Water	WP-00813-01	$ 25,916
Sacramento State College Sacramento			
Kerri, Kenneth D. Associate Prof. of Engineering	Complementary-Competitive Aspects of Water Storage	WP-01008-01	18,988
Sewage Treatment Laboratory Concord			
Aitken, Thomas W., B.S. Sewage Treatment Laboratory	Systematic Phycology of an Oxidation Pond	WP-00638-03	1,300
Stanford University Stanford			
Franzini, Joseph B., Ph.D. Dept. of Civil Engineering	Further Studies of Infiltration	WP-00248-05A1	25,917
McCarty, Perry L., Sc. D. Dept. of Civil Engineering	Anaerobic Waste Treatment Kinetics	WP-00584-03	20,912
McCarty, Perry L., Sc. D. Dept. of Civil Engineering	Pesticide Distribution and Degradation in Waterways	WP-00715-02	20,073
University of California Berkeley			
Fuerstenau, Douglas W., Sc.D. Dept. of Mineral Technology	Absorption of Alkylaryl Surfactants on Polar Solids	WP-00692-02	24,900
Jenkins, David I. Ph.D. Div. of Hydraulic and Sanitary Engineering	Transient Loading Effects in the Activated Sludge Process	WP-00787-02	20,924
Kaufman, Warren J. Div. of Hydraulic Engineering	Orthokinetic Flocculation of Heterodispersed Systems	WP-00658-03	25,215
McGauhey, Percy H., M.S. Sanitary Engineering Research Laboratory	Travel of Synthetic Detergents with Percolating Water	WP-00207-06	33,442
McGauhey, Percy H., M.S. Sanitary Engineering Research Laboratory	Partial Demineralization of Saline Sewage by Ion Exchange	WP-00544-03 WP-00544-03S1	1,667 *

* Active 1966 - Supported by funds awarded in previous years

LOCATION AND INVESTIGATOR	PROJECT TITLE	GRANT NO.	AMOUNT
CALIFORNIA (cont.)			
University of California Berkeley			
McGauhey, Percy H., M.S. Sanitary Engineering Research Laboratory	Economics Evaluation of Water Quality	WP-00397-03	$ 12,036
McGauhey, Percy H., M.S. Sanitary Engineering Research Laboratory	Soil Mantle as a Waste Water Treatment System	WP-00764-02	30,533
Oswald, William J., Ph.D. Institute of Engineering Research	Nutritional and Disease Transmitting Properties of Sewage G[illegible]n Algae	WP-00820-03	29,403
Pearson, Bruno A., Sc.D. Div. of Hydraulic and Sanitary Engineering	Reaction Kinetics of Anaerobic Fermentation Systems	WP-00830-02	33,300
Selleck, Robert E., Ph.D. Div. of Hydraulic and Sanitary Engineering	Estuarine Water Quality Interrelationships	WP-00849-02	39,992
University of California Davis			
Bigger, James W., Ph.D. Dept. of Irrigation	Sorption and Movement of Polluted Water in Soil	WP-00081-03	31,087
Smith, Joe M. Dept. of Chemical Engineering and Food Science	Photochemical Reactions in Water and Air Pollution	WP-00952-01	32,129
Watt, Kenneth E. F., Ph.D. Dept. of Zoology	Effects of Cover in Aquatic Predator-Prey Systems	WP-00929-01	13,660
University of California Riverside			
Bradford, Gordon R., M.S. Dept. of Soils and Plant Nutrition	Effect of Trace Elements on Reuse of Water	WP-00484-03	11,294
University of the Pacific Stockton			
Smith, Edmund H. Pacific Marine Station	Environmental Biology of Tomales Bay	WP-01081-01	23,750

LOCATION AND INVESTIGATOR	PROJECT TITLE	GRANT NO.	AMOUNT
CALIFORNIA (cont.)			
University of Southern California Los Angeles			
Bandy, Orville L., Ph.D. Dept. of Geology	Benthonic Foraminifera Relationship to Ocean Pollution	WP-00158-06	$ _____*
Foxworthy, James E., Ph.D. Allan Hancock Foundation	Eddy Diffusion and Bacterial Reduction in Waste Fields	WP-00931-01	1,107
Tibby, Richard B., Ph.D. Allan Hancock Foundation	Ultraviolet Absorption in Coastal Waters	WP-00762-02	38,213
COLORADO			
Colorado State University Fort Collins			
Hanan, Joe J., Ph.D. Dept. of Horticulture	Irrigation Regimes for Water Conservation	WP-00780-02	16,922
Morrison, S. M., Ph.D. Dept. of Pathology and Microbiology	Watershed Environment and Microbial Dynamics	WP-00679-03	25,032
Ward, John C., Ph.D. Dept. of Civil Engineering	Turbulent Flow in Porous Media	WP-00914-01	_____*
University of Colorado Boulder			
Brown, Lee F., Ph.D. Dept. of Chemical Engineering	The Effect of Porous Structure on Carbon Activation	WP-00853-02	16,454
CONNECTICUT			
University of Connecticut Storrs			
Collins, Ralph P., Ph.D. Dept. of Botany and Institute of Cellular Biology	A Study of Microorganisms Inducing Tastes and Odors in Water	WP-00005-05	20,751
Trainor, Francis R., Ph.D. Dept. of Botany	A Study of Scenedesmus Species in Culture	WP-00850-02	8,562

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LOCATION AND INVESTIGATOR	PROJECT TITLE	GRANT NO.	AMOUNT
DISTRICT OF COLUMBIA			
Levine, Benjamin S., Ph.D. Individual	U.S.S.R. Literature on Water Supply and Pollution Control	WP-00305-07	$ 17,237
Water Pollution Control Federation			
Eckenfelder, W. Wesley, M.S. Chairman, Finance Committee	Third International Conference on Water Pollution Research	WP-00945-01	32,000
FLORIDA			
Florida State Board of Health Jacksonville			
Patterson, Richard S., Ph.D. Midge Research Laboratory	Causes and Relief of Hypereutrophication of Lakes	WP-00216-06	13,839
Lackey, James B., Ph.D. Melrose, Individual	Taxonomy and Ecology of Inshore Marine Microbiota	WP-00901-01 WP-00901-02	5,402 13,200
University of Florida Gainesville			
Berner, Lewis, Ph.D. Dept. of Zoology	Immature Insects of the Southeastern River Beds	WP-00372-03	_____*
Black, Alvin P., Ph.D. Dept. of Chemistry	A Comprehensive Study of Water Coagulation	WP-00139-10	_____*
Bruun, Per M., Sc.D. Coastal Engineering Laboratory	Fluorescent Tracing of Sediments in Coastal Areas	WP-00057-04	_____*
Bruun, Per M., Sc.D. Coastal Engineering Laboratory	Transversal Drifts in Bottom Profile	WP-00889-01	29,252
Calaway, Wilson T., M.S. Dept. of Entomology	Nematodes of Sewage Treatment and their Significance	WP-00508-03S1 WP-00508-04	11,947 26,980
Morgan, James J., Ph.D. Dept. of Civil Engineering	Flocculation Behavior of Dilute Clay-Polymer Systems	WP-00845-01	_____*
Morgan, James J., Ph.D. Dept. of Civil Engineering	The Chemistry of Manganese in Natural Waters	WP-00732-01	_____*
Nordlie, Frank G., Ph.D. Dept. of Zoology	Chemical and Biological Dynamics in Two Solution Lakes	WP-00530-03	9,660

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LOCATION AND INVESTIGATOR	PROJECT TITLE	GRANT NO.	AMOUNT
FLORIDA (cont.)			
University of Florida Gainesville			
Putnam, Hugh D., Ph.D. Phelps Laboratory for Sanitary Engineering Research	Primary Production and Decomposition in Estuarine Water	WP-00678-02	$ 19,356
Smith, Paul H., Ph.D. Dept. of Bacteriology	Studies on the Methanogenic Bacteria in Sludge	WP-00198-06	21,856
University of Miami Coral Gables			
Greenfield, Leonard J. Institute of Marine Science	Contribution of Microbial Calcification to Sediments	WP-00902-02	12,900
Idyll, C. P., Ph.D. Institute of Marine Science	Estuarine Ecology in Relation to Water Use	WP-00400-03	46,298
Moore, Hilary B., Ph.D. Institute of Marine Science	The Biology of the Infauna of a Tropical Soft Bottom Area	WP-00573-03	30,602
Wood, Edward J. F., Sc.D. Institute of Marine Science	Periphyton of the Everglades; an Unpolluted System	WP-00709-02	30,132
GEORGIA			
Georgia Institute of Technology Atlanta			
Carstens, Marion R. Hydraulics Laboratory	Diffusivity of Particles in a Turbulent Field	WP-00912-01	13,920
Ingols, Robert S., Ph.D. Engineering Experiment Station	Biodegradation of Halogenated Phenolics	WP-00188-06	13,952
O'Melia, Charles R., Ph.D. Engineering Science Laboratory	The Role of Zeta Potential in Sand Filtration	WP-00382-04	13,911
Georgia State College Atlanta			
Singley, John E., M.S. Dept. of Chemistry	Stoichiometry and Mechanisms of Coagulation	WP-00717-02	12,901
ILLINOIS			
Eastern Illinois University Charleston			
Durham, Leonard, Ph.D. Dept. of Zoology	Recovery of a Stream System from Cyanide Poisoning	WP-00792-02	11,190

LOCATION AND INVESTIGATOR	PROJECT TITLE	GRANT NO.	AMOUNT
ILLINOIS (cont.)			
Eastern Illinois University Charleston			
Whitley, L. Stephen, Ph.D. Dept. of Zoology	The Systematics of the Tubificids of Illinois	WP-00937-01	$ 3,766
Illinois Institute of Technology Chicago			
Grieves, Robert E., Ph.D. Dept. of Civil Engineering	Foam Separation Flotation of Colloid Organic Systems	WP-00702-02	20,452
Kintner, Robert C., Ph.D. Dept. of Chemical Engineering	Coalescence of Drops in Fibrous Beds	WP-00366-04	17,874
Martell, Arthur E., Ph.D. Dept. of Chemistry	Permanganate Oxidation of Phenols and Aromatic Amines	WP-00744-02	25,606
Northwestern University Evanston			
Charnes, Abraham, Ph.D. Dept. of Engineering Sciences	Systems Analysis of Municipal Sewage Treatment	WP-00019-06	_____*
Pipes, Wesley O., Ph.D. Dept. of Civil Engineering	Ecology of Sphaerotilus in Activated Sludge	WP-00588-02	22,529
University of Illinois Urbana			
Engelbrecht, Richard S., Sc.D. Dept. of Civil Engineering	Factors Influencing Free-Living Nematodes in Water	WP-00047-05 WP-00047-05S1	29,312 14,492
Engelbrecht, Richard S., Sc.D. Dept. of Civil Engineering	Fundamental Factors in Treatment of Iron-Bearing Waters	WP-00017-06	_____*
Engelbrecht, Richard S., Sc.D. Dept. of Civil Engineering	Contact Removal of Organic Matter by Microorganisms	WP-00640-03	27,649
Evans, Ralph L. Illinois State Water Survey	Effect of Coarse Filter Media on Artificial Recharge	WP-00447-03	_____*
Ewing, Ben B., Ph.D. Dept. of Civil Engineering	Organo-Clay Absorptive Reactions and Water Coagulation	WP-00801-02	20,603
Grim, Ralph E., Ph.D. Dept. of Geology	Atomic Structural Control of Selective Adsorption	WP-00399-02	_____*

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LOCATION AND INVESTIGATOR	PROJECT TITLE	GRANT NO.	AMOUNT
ILLINOIS (cont.)			
University of Illinois Urbana			
Larson, Thurston E., Ph.D. Illinois State Water Survey	Corrosion and Tuberculation in Distribution Systems	WP-00132-10	$ 21,032
Larson, Thurston E., Ph.D. Illinois State Water Survey	Chromatographic Analysis for Organic Acids in Water	WP-00270-06	12,315
McPherson, Murray B. Dept. of Civil Engineering	Criteria for Analysis of Water Distribution Systems	WP-00526-02	_____*
Speece, Richard E., Ph.D. Dept. of Civil Engineering	Controlling Factors in Methane Fermentation	WP-00394-04	7,500
Westwater, J. W., Ph.D. Dept. of Chemical Engineering	Mass Transfer through Interfaces	WP-00601-03	14,535
INDIANA			
Purdue Research Foundation West Lafayette			
Kirsch, Edwin J., Ph.D. Dept. of Sanitary Engineering	Microbial Interactions in Waste Treatment Systems	WP-00760-02	19,291
Purdue University Lafayette			
Bloodgood, Don E., C.E. Dept. of Civil Engineering	Foreign Engineers and Scientists to Purdue Industrial Waste Conference	WP-00861-01	10,760
IOWA			
Iowa State University of Science and Technology Ames			
Dodd, John D., Ph.D. Dept. of Botany and Plant Pathology	Ecology of Diatoms in Hardwater Habitats	WP-00221-06	11,400
Kirkham, Don, Ph.D. Dept. of Agronomy and Physics	Movement of Water from Waste Recharge Installations	WP-00070-05	22,860
Morgan, Paul E., M.S. Dept. of Civil Engineering	Design Requirements for Municipal Diatomite Filters	WP-00196-06	21,748

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LOCATION AND INVESTIGATOR	PROJECT TITLE	GRANT NO.	AMOUNT
IOWA (cont.)			
University of Iowa Iowa City			
McDonald, Donald B., Ph.D. Dept. of Civil Engineering	Factors Affecting Actinomycete Populations	WP-00740-02	$ 4,064
Morris, Robert L., Ph.D. State Hygienic Laboratory	Effect of Surface Water Actinomycetes on BOD vs COD	WP-00378-03	____*
Smith H. Sidwell, Ph.D. Dept. of Civil Engineering	Oxygen Use Rate in Activated Sludge Systems	WP-00695-02	10,098
KANSAS			
Kansas State Teachers College Emporia			
Prophet, Carl W., Ph.D. Dept. of Biology	Limnology of the John Redmond Reservoir, Kansas	WP-00615-03	8,288
Kansas State University Manhattan			
Lambert, Jack L., Ph.D. Dept. of Chemistry	Ligand Exchange Reagents	WP-00326-05	5,468
Meloan, Clifton E., Ph.D. Dept. of Chemistry	Determination of Ammonia	WP-00235-05	8,269
University of Kansas Center for Research, Inc. Lawrence			
Loehr, Raymond C., Ph.D. Dept. of Civil Engineering	Aerobic Microbial Degradation of Lipids	WP-00341-04	13,450
Pfeffer, John T., Ph.D. Dept. of Civil Engineering	Trace Element Needs of Filamentous Microorganisms	WP-00646-03	9,697
University of Kansas Lawrence			
McKinney, Ross E., Sc.D. Dept. of Civil Engineering	Complete Mixing Activated Sludge	WP-00248-03	____*

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LOCATION AND INVESTIGATOR	PROJECT TITLE	GRANT NO.	AMOUNT
KENTUCKY			
Kentucky Research Foundation University of Kentucky Lexington			
Lauderdale, Robert A., Ph.D. Dept. of Civil Engineering	Removal of Pesticides from the Environment	WP-00467-02	$ _____*
LOUISIANA			
Aquatic Ecology Section Ecological Society of America New Orleans			
Gunning, Gerald E., Ph.D. Secretary, Aquatic Ecology Section	Travel Request U.S. Participants to XVI ICL, Poland (International Congress of Limnology)	WP-00898-01	_____*
Louisiana State University Baton Rouge			
Colmer, Arthur R., Ph.D. Dept. of Bacteriology	Autotrophic Iron Oxidizers from Acid Waste Waters	WP-00549-03	_____*
West, Philip W., Ph.D. Dept. of Chemistry	Sampling and Determining Traces of Silver in Waters	WP-00788-02	13,256
MAINE			
Maine Department of Inland Fisheries and Game Augusta			
Everhart, W. Harry, Ph.D. Dept. of Zoology	[illegible]olution of Allpatric Populations	WP-00888-01	22,920
University of Maine Orono			
Sproul, Otis J., Sc.D. Dept. of Civil Engineering	Effect of Chemical Ions on Virus Inactivation	WP-00387-03	30,883
Zieminski, Stefan A. Dept. of Chemical Engineering	Use of Chemical Additives to Improve Aeration Rates	WP-00562-02	11,173

* Active 1966 Supported by funds awarded in previous years

LOCATION AND INVESTIGATOR	PROJECT TITLE	GRANT NO.	AMOUNT
MARYLAND			
The Johns Hopkins University Baltimore			
Geyer, John C., Dr. Eng. Dept. of Sanitary Engineering and Water Resources	Ground Water Storage Project	WP-00444-04	$ 23,855
Renn, Charles E., Ph.D. Dept. of Environmental Science	Reducing Secondary Effluent Phosphorus Concentration	WP-00099-05	21,540
University of Maryland College Park			
Cookson, John T., Ph.D. Dept. of Civil Engineering	Virus Removal in Packed Beds by Mass Transfer	WP-00981-01	19,558
Marchello, Joseph M., Ph.D. Dept. of Chemical Engineering	Role of Ripples and Molecular Films on Mass Transfer	WP-00323-05	16,320
Stross, Raymond G., Ph.D. Dept. of Zoology	Control of Nuisance Algae in Lakes	WP-00101-03	_____*
MASSACHUSETTS			
Boston University Boston			
Jones, Galen E., Ph.D. Dept. of Biology	Effect of Organic Substances from Sea on Bacteria	WP-00650-03	24,793
Harvard School of Public Health Boston			
Thomas, Harold A., Jr., Sc.D. Dept. of Sanitary Engineering	Transport and Fate of Pollutants in Soil	WP-00626-02	33,716
Harvard University Cambridge			
Dorfman, Robert, Ph.D. Dept. of Economics	The Economics of Water Supply and Quality	WP-00919-01	32,176
Fair, Gordon M., Sc.D. Dept. of Water Resources and Sanitary Engineering	Internal Hydraulic Work in Flocculation	WP-00024-05	_____*
Fair, Gordon M., Sc.D. Div. of Environmental Sciences and Engineering	Inhibition and Repression in Substrate Utilization	WP-00621-02	_____*

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LOCATION AND INVESTIGATOR	PROJECT TITLE	GRANT NO.	AMOUNT
MASSACHUSETTS (cont.)			
Harvard University Cambridge			
Mitchell, Ralph, Ph.D. Dept. of Water Resources and Sanitary Engineering	Degradation of Sewage and Soil Microorganisms	WP-00967-01	$ 14,125
Stumm, Werner, Ph.D. Div. of Engineering and Applied Physics	Oxygenation of Ferrous Iron	WP-00013-07	15,157
Stumm, Werner, Ph.D. Div. of Engineering and Applied Physics	Modes of Corrosion Inhibition in Natural Waters	WP-00043-05	14,768
Stumm, Werner, Ph.D. Div. of Engineering and Applied Physics	Chemical Aspects of Coagulation	WP-00098-05 WP-00098-05S1	15,350 11,620
Stumm, Werner, Ph.D. Div. of Engineering and Applied Physics	Symposium on Concepts in Water Analysis	WP-00899-01	_____*
Thomas, Harold A., Jr., Sc.D. Dept. of Environmental Sciences and Engineering	Operations Research in Water Quality Management	WP-00111-04	125,922
Massachusetts Health Research Institute Inc. Boston			
Delaney, John E. Lawrence Experiment Station	Methods for Measuring the Coliform Content of Water	WP-00202-05	_____*
Massachusetts Institute of Technology Cambridge			
Harleman, Donald R., Sc.D. Dept. of Civil Engineering	Pollutants in Heterogeneous and Anisotropic Aquifers	WP-00711-02	19,035
McLaughlin, Ronald T., Ph.D. Dept. of Civil Engineering	Optimal Design of Sewer and Drainage Systems	WP-00812-02	16,592
University of Massachusetts Amherst			
Carver, Charles E., Jr., Sc.D. Dept. of Civil Engineering	Efficiency of Oxygen Transfer in Spray Aeration	WP-00450-01	_____*

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LOCATION AND INVESTIGATOR	PROJECT TITLE	GRANT NO.	AMOUNT
MICHIGAN			
Michigan State University East Lansing			
Ball, Robert C., Ph.D. Dept. of Fisheries and Wildlife	Serum Stress Patterns as Related to Stream Ecology	WP-00369-03	$ _____*
Fromm, Paul O., Ph.D. Dept. of Physiology	Toxic Action of Soluble Pollutants on Freshwater Fish	WP-00807-06A1	15,210
University of Michigan Ann Arbor			
Ayers, John C., Ph.D. Great Lakes Research Division	A Coherent-Area Study of Southern Lake Michigan	WP-00311-03 WP-00311-03S1	289,141 22,680
Borchardt, J. A., Ph.D. Dept. of Civil Engineering	The Use of Algae in the Treatment of Sewage Effluents	WP-00155-08	11,824
Borchardt, J. A., Ph.D. Dept. of Civil Engineering	Sand Filtration of Discrete Suspensions	WP-00329-04	12,871
Borchardt, J. A., Ph.D. Dept. of Civil Engineering	Organic Decomposition at Poised O-R Potential Levels	WP-00333-04 WP-00333-04S1	20,180 23,814
Brater, Ernest F., Ph.D. Dept. of Civil Engineering	Rainfall-Runoff Relations on Urban and Rural Areas	WP-00834-02	9,663
Mancy, Khalil H., Ph.D. Dept. of Environmental Health	Oxygen Determination in Natural Waters and Wastes	WP-00886-01	19,756
Noble, Vincent E., Ph.D. Great Lakes Research Division	Vertical Current Structure in the Great Lakes	WP-00794-01	_____*
Velz, Clarence J. Dept. of Environmental Health	Biological Extraction and Accumulation in Streams	WP-00091-05	73,951
Velz, Clarence J. Dept. of Environmental Health	Investigation of Pumped Storage for Flow Augmentation	WP-00689-03	49,627
Weber, Walter J., Jr., Ph.D. Dept. of Civil Engineering	Interactions of Silica with Iron and Aluminum	WP-00674-01A1	18,036
Weber, Walter J., Jr., Ph.D. Dept. of Civil Engineering	Absorption from Aqueous Solution	WP-00706-02	23,040

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LOCATION AND INVESTIGATOR	PROJECT TITLE	GRANT NO.	AMOUNT
MINNESOTA			
University of Minnesota Minneapolis			
Anderson, Alvin G. St. Anthony Falls Hydraulic Laboratory	Flow Conditions in Soils and Filters	WP-00796-01	$ _____*
Olson, Theodore A., Ph.D. School of Public Health	Benthonic Invertebrates as an Index of Water Quality	WP-00320-04	30,339
Olson, Theodore A., Ph.D. School of Public Health	Lake Superior Periphyton in Relation to Water Quality	WP-00828-02	24,586
Shapiro, Joseph, Ph.D. Dept. of Geology	Inorganic-Organic Interactions in Natural Waters	WP-00771-02	30,432
Silberman, Edward, M.S. St. Anthony Falls Hydraulic Laboratory	The Role of Mixing in Maintaining Stratified Flow	WP-00913-01	33,882
Smith, Lloyd L., Ph.D. Dept. of Entomology, Wildlife and Fisheries	Effect of Paper Fiber Wastes on Fish Eggs and Juveniles	WP-00223-06	30,420
Winona State College Winona			
Fremling, Calvin R., Ph.D. Dept. of Biology	Mayfly Distribution as a Water Quality Index	WP-00987-01	6,028
MISSOURI			
University of Missouri Columbia			
Campbell, Robert S., Ph.D. Dept. of Zoology	Recovery from Acid Pollution in Four Strip-Mine Lakes	WP-00379-04	31,999
Enns, Wilbur R., Ph.D. Dept. of Entomology	Insects Associated with Midwestern Oxidation Lagoons	WP-00718-02	12,714
Smith, George E., Ph.D. Dept. of Soils	Nitrates in Water Supplies	WP-00533-03	15,058

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LOCATION AND INVESTIGATOR	PROJECT TITLE	GRANT NO.	AMOUNT
MISSOURI (cont.)			
Washington University St. Louis			
Ryckman, D. W. Dept. of Civil and Environmental Engineering	Pesticide Detection and Bioassay Response in Water	WP-00946-01	$ 53,188
Skrinde, Rolf T., Ph.D. Dept. of Environmental and Sanitary Engineering	Detection and Removal of Organic Pesticides in Water	WP-00433-03	_____*
Skrinde, Rolf T., Ph.D. Dept. of Environmental and Sanitary Engineering	Chemical Oxidation of Trace Organics in Water	WP-00346-03	_____*
MONTANA			
Montana State University Bozeman			
Berg, Lloyd, Ph.D. Dept. of Chemical Engineering	Terpenes from Sulfate Pulp Mill Waste Liquor	WP-00510-04	17,628
Brown, C.J.D., Ph.D. Dept. of Zoology and Entomology	Effects of Pollutants on Fish Blood Serum Patterns	WP-00438-02	7,179
Wright, John C., Ph.D. Dept. of Botany and Bacteriology	The Hydrobiology of the Madison River and its Headwaters	WP-00125-04	26,880
University of Montana Foundation Missoula			
Nakamura, Mitsuru, Ph.D. Dept. of Microbiology	Detection and Significance of Enzootic Water Pollution	WP-00824-01	18,326
NEW HAMPSHIRE			
University of New Hampshire Durham			
Slanetz, Lawrence W., Ph.D. Dept. of Microbiology	Enteric Bacteria and Viruses in Sewage, Water and Shellfish	WP-00009-10	41,752

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LOCATION AND INVESTIGATOR	PROJECT TITLE	GRANT NO.	AMOUNT
NEW JERSEY			
Princeton University Princeton			
Brush, Lucien M., Jr., Ph.D. Dept. of Civil Engineering	Inertial Effects in Turbulent Suspensions	WP-00772-02	$ 3,581
Rutgers, The State University New Brunswick			
Dondero, Norman C., Ph.D. Dept. of Environmental Science	Continuous Flow and Batch Cultures of Sphaerotilus	WP-00212-06	18,834
Dondero, Norman C., Ph.D. Dept. of Environmental Science	Adaptation by Microbial Populations	WP-00645-03	14,951
Faust, Samuel D., Ph.D. Dept. of Environmental Science	Organic Pesticides and Herbicides from Water	WP-00206-06	8,689
Faust, Samuel D., Ph.D. Dept. of Environmental Science	Determination of Phenols in Water and Wastewater	WP-00365-03	_____*
Faust, Samuel D., Ph.D. Dept. of Environmental Science	Principles and Applications of Water Chemistry Conference	WP-00880-01	_____*
Heukelekian, H., Ph.D. Dept. of Environmental Science	The Effect of Composition of Wastewater on the Activated Sludge Characteristics	WP-00133-09	_____*
Moul, Edward T., Ph.D. Dept. of Botany	Diatom Communities of the Raritan River System	WP-00949-01	14,767
Trama, Francesco B., Ph.D. Dept. of Zoology	Impoundment Studies on the Raritan River, New Jersey	WP-00059-05	7,182
NEW MEXICO			
Eastern New Mexico University Portales			
Sublette, James E., Ph.D. Dept. of Biological Sciences and Chemistry	Cytotaxonomy and Related Studies of Holarctic Midges	WP-00468-03	18,395
New Mexico State University University Park			
Clark, John W. Dept. of Civil Engineering	Continuous Monitoring of Some Organic Wastes	WP-00631-02	15,205

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LOCATION AND INVESTIGATOR	PROJECT TITLE	GRANT NO.	AMOUNT
NEW MEXICO (cont.)			
New Mexico State University University Park			
Speece, Richard E., Ph.D. Dept. of Civil Engineering	Controlling Factors in Methane Fermentation	WP-01001-01	$ 15,219
NEW YORK			
Boyce Thompson Institute for Plant Research Yonkers			
Torgeson, Dewayne C., Ph.D. Program Director, Bioregulant Chemicals	Interaction of Herbicides and Soil Microorganisms	WP-00750-02	22,648
City College Research Foundation New York			
Haines, Thomas H., Ph.D. Dept. of Chemistry	Structure and Function of a New Sulfolipid	WP-00675-0282 WP-00675-03	3,242 23,081
Clarkson College of Technology Potsdam			
Goodrich, Frank C., Ph.D. Dept. of Chemistry	The Surface Shear Viscosity of Monomolecular Films	WP-00960-01	21,107
Jellinek, Hans H. G., Ph.D. Dept. of Chemistry	Photodegradation of Polymers in Aqueous Solutions	WP-00791-02	26,328
Matijevic, Egon, Ph.D. Dept. of Chemistry	Flocculation of Colloids Suspended in Water	WP-00815-02	20,200
Columbia University New York City			
Gumbel, Emil J., Ph.D. Dept. of Industrial and Management Engineering	Statistical Theory of Extreme Values and their Application in Hydrology	WP-00457-04	15,780
Linford, Henry B., Ph.D. Dept. of Chemical Engineering	Cationic Polymers as Flocculant Aids in Water	WP-00240-05	36,699
Cornell University Ithaca			
Bohn, Vaughn C., Ph.D. Dept. of Sanitary Engineering	Mass Transfer into Non-Newtonian Systems	WP-00229-04	_____*

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LOCATION AND INVESTIGATOR	PROJECT TITLE	GRANT NO.	AMOUNT
NEW YORK (cont.)			
Cornell University Ithaca			
Behn, Vaughn C., Ph.D. Dept. of Sanitary Engineering	Application of Second Order Reaction	WP-00234-05	$ 12,886
Graf, Walter H. School of Civil Engineering	The Transport of Solid Suspension in Conduits	WP-00838-01A1	21,132
Liggett, James A., Ph.D. School of Civil Engineering	Settling Velocities in a Turbulent Environment	WP-00605-03	17,940
Liggett, James A., Ph.D. Dept. of Hydraulics	Mathematical Models of Hydrologic Systems	WP-00948-01	29,735
Cornell University State College of Agriculture Ithaca			
Barlow, John P., Ph.D. Dept. of Conservation	Eutrophication of Tidal Waters	WP-00176-08	19,256
Manhattan College New York City			
Farrell, Joseph B., Ph.D. Dept. of Chemical Engineering	Prevention of Chromate Pollution by Electrodialysis	WP-00742-02	20,563
Jeris, John S., Sc.D. Dept. of Civil Engineering	The Bio-chemistry of Anaerobic Digestion	WP-00577-03	15,002
O'Connor, Donald J., Sc.D. Dept. of Civil Engineering	Estuarine Water Quality and Pollution	WP-00677-02	_____*
New York University New York City			
Mehr, Emmanuel, M.A. Dept. of Meteorology and Oceanography	Computer Interpretation of Dye Dump Studies	WP-00662-02	10,500
Molof, Alan, Ph.D. Dept. of Civil Engineering	Cation Effects in Anaerobic Waste Treatment	WP-00690-03	16,708

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LOCATION AND INVESTIGATOR	PROJECT TITLE	GRANT NO.	AMOUNT
NEW YORK (cont.)			
Polytechnic Institute of Brooklyn Brooklyn			
Bruins, Paul F., Ph.D. Dept. of Chemical Engineering	Advance Waste Treatment by Ultrafiltration	WP-00620-02	$ 34,498
Rensselaer Polytechnic Institute Troy			
Washington, Donald R., Ph.D. Dept. of Civil Engineering	Oxygen Utilization in Concentrated Microbial Systems	WP-00876-01	30,120
Research Foundation of State University of New York Albany			
Rumer, Ralph R., Jr., Sc.D. Dept. of Civil Engineering	Dynamic Model Study of Lake Erie	WP-00837-01	22,924
Storr, John F., Ph.D. Dept. of Biology	Ecology of Polluted and Non-Polluted Lake Communities	WP-01065-01	18,765
Syracuse University Syracuse			
Bardohn, Allen J., Ph.D. Dept. of Chemical Engineering	Removal of Dissolved Organic and Inorganic Solids from Wastewater	WP-00729-01	_____*
Jackson, Daniel F., Ph.D. Dept. of Civil Engineering	Ecology of Cladophora Fracta and Cladophora Glomerata	WP-00782-02	15,494
Kramer, James R., Ph.D. Dept. of Geology	Mineral-Water Chemistry, Great Lakes	WP-00868-01	28,178
Li, Wen-Hsiung, Ph.D. Dept. of Civil Engineering	Transverse Dispersion of Contaminant in Groundwater	WP-00575-03	19,452
Lundgren, Donald G., Ph.D. Biological Research Laboratory	Physiology and Culture of Iron Oxidizing Bacteria	WP-00548-04	21,444
Rand, Myrton C., Ph.D. Dept. of Civil Engineering	Kinetics of Oxidation of Sulfites by Dissolved Oxygen	WP-00074-03	_____*

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LOCATION AND INVESTIGATOR	PROJECT TITLE	GRANT NO.	AMOUNT
NEW YORK (cont.)			
Syracuse University Syracuse			
Tien, Chi, Ph.D. Dept. of Metallurgy and Chemical Engineering	A Study of Aeration Process in Non-Newtonian Media	WP-00719-02	$ 13,299
Tien, Chi, Ph.D. Dept. of Metallurgy and Chemical Engineering	Atomization and Drop Size of Non-Newtonian Fluid	WP-00867-01	19,080
Tien, Chi, Ph.D. Dept. of Metallurgy and Chemical Engineering	The Effect of Gas Bubble Motion on Fluid Mixing in Aeration Process	WP-00922-01A1	20,520
NORTH CAROLINA			
Duke University Durham			
Bryan, Edward H., Ph.D. Dept. of Civil Engineering	Biochemical Utilization of Chemically Combined Oxygen	WP-00316-05	14,222
Menzies, Robert J., Ph.D. Dept. of Zoology	Distribution of Life with Depth	WP-00936-01A1	15,878
North Carolina State University Raleigh			
Horton, Donald B., Ph.D. Resident Director, Dept. of Zoology	Phosphate Mining Effluent in Estuarine Ecology	WP-00958-01	74,294
University of North Carolina Chapel Hill			
Lamb, James C., III, Sc.D. Dept. of Environmental Science and Engineering	Design Criteria for Final Tank and Sludge Thickeners	WP-00569-03	18,828
Mah, Robert A., Ph.D. Dept. of Environmental Science and Engineering	Microbiology of Anaerobic Sludge	WP-00921-01	20,721
Okun, Daniel A., Sc.D. Dept. of Environmental Science and Engineering	Oxygen in Waste Treatment	WP-00131-10	_____*

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LOCATION AND INVESTIGATOR	PROJECT TITLE	GRANT NO.	AMOUNT
NORTH CAROLINA (cont.)			
University of North Carolina Chapel Hill			
Weiss, Charles M., Ph.D. Dept. of Environmental Science and Engineering	Direct Gas Chromatography of Organics in Water	WP-00563-02	$ 5,153
Wicker, Warren J. Institute of Government	Arrangements for Water Sources in Selected North Carolina Areas	WP-00352-03	_____*
OHIO			
Case Institute of Technology Cleveland			
Sparks, Robert E. Division of Engineering	Emulsion Braking by Coalescence on Adsorbed Films	WP-00854-02	24,218
Kenyon College Gambier			
Pappenhagen, James M., Ph.D. Dept. of Chemistry	Determination of Ions in Wastes and Waters	WP-00137-11	9,250
Ohio State University Research Foundation Columbus			
Dugan, Patrick, Ph.D. Dept. of Microbiology	Fish Susceptibility to Pesticides and Detergents	WP-00793-01	_____*
Dugan, Patrick, Ph.D. Dept. of Microbiology	Concentration of Chemicals by Floc Forming Organisms	WP-00713-01	22,900
Randles, Chester I., Ph.D. Dept. of Microbiology	Aquatic Bacteria Related to Acid-Mine Drainage	WP-00147-10	_____*
Smith, Edwin E., Ph.D. Dept. of Chemical Engineering	Study of the Sulfide-to-Sulfate Reaction Mechanism	WP-00340-05	21,096
Taft, Clarence E., Ph.D. Dept. of Botany and Plant Pathology	The Diatoms of the West End of Lake Erie	WP-00317-05	29,373

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LOCATION AND INVESTIGATOR	PROJECT TITLE	GRANT NO.	AMOUNT
OHIO (cont.)			
University of Cincinnati Cincinnati			
Eye, J. David, M.S. Dept. of Sanitary Engineering	Trickling Filter Effluent Quality Control by O.R.P.	WP-00065-03	$ _____*
Eye, J. David, M.S. Dept. of Sanitary Engineering	Field Evaluation of Extended Aeration Plants	WP-00693-02	24,360
Lemlich, Robert, Ph.D. Dept. of Chemical Engineering	Foam Fractionation with Reflux	WP-00161-07	9,560
Lemlich, Robert, Ph.D. Dept. of Chemical Engineering	Non-Foaming Bubble Fractionation	WP-00814-02	9,511
Mancy, Khalil H., Ph.D. Dept. of Civil Engineering	Dissolved Oxygen Determination in Natural and Wastewater	WP-00566-02	_____*
Scarpino, Pasquale V., Ph.D. Dept. of Civil Engineering	Factors Influencing Survival of Bacteria in Sea Water	WP-00844-02	19,425
University of Toledo Research Foundation Toledo			
Bennett, Gary F., Ph.D. Dept. of Chemical Engineering	Oxygen Transfer Rates through Biological Slimes	WP-00822-01	12,492
OKLAHOMA			
Oklahoma State University Stillwater			
Gaudy, Anthony F., Jr., Ph.D. School of Civil Engineering	Response of Activated Sludge to Organic Shock Loads	WP-00075-05	24,903
Gaudy, Anthony F., Jr., Ph.D. School of Civil Engineering	Kinetics and Mechanism in Activated Sludge Processes	WP-00325-04	32,190
Gaudy, Anthony F., Jr., Ph.D. School of Civil Engineering	Metabolic Control Mechanisms in Biological Treatment	WP-00786-02	27,786

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LOCATION AND INVESTIGATOR	PROJECT TITLE	GRANT NO.	AMOUNT
OKLAHOMA (cont.)			
University of Oklahoma Research Institute Norman			
Klehr, Edwin H., Ph.D. Dept. of Civil Engineering and Environmental Sciences	Mixed Resin Sampler Kit for Analysis of Polluted Waters	WP-00373-03	$ 4,365
OREGON			
Oregon State University Corvallis			
Bond, Carl E., Ph.D. Dept. of Fisheries and Wildlife	Relation of Nuisance Algae to Fishes in Klamath Lake	WP-00625-03	15,900
Burgess, Fred J., M.S. Engineering Experiment Station	Pulp Mill Waste Degradation in Marine Water	WP-00524-03 WP-00524-03S1	26,907 8,250
Castle, Emery N., Ph.D. Dept. of Agricultural Economics	An Economic Evaluation of Water Pollution Control	WP-00107-04	18,072
Freed, Virgil H., Ph.D. Dept. of Agriculture Chemistry	Chemical Brush Control Biochemistry and Toxic Hazard	WP-00477-04	24,934
Goulding, Robert L., Ph.D. Dept. of Entomology	Macro-Fauna in Waste Stabilization Lagoons	WP-00923-01	14,334
Hall, James D., Ph.D. Dept. of Fisheries and Wildlife	Studies on Effects of Watershed Practices on Streams	WP-00423-04	31,000
Marvell, Elliot N., Ph.D. Dept. of Chemistry	Components of Kraft Mill Wastes and their Toxicities	WP-00079-09	4,882
Morita, Richard Y., Ph.D. Dept. of Microbiology	Study of Beggiatoa Species	WP-00443-03	_____*
Pacha, Robert E., Ph.D. Dept. of Microbiology	Studies on Aquatic Myxobacteria	WP-00925-01	12,573
Phinney, Harry K., Ph.D. Dept. of Botany	The Autecology of Some Blue-Green Plankton Algae	WP-00666-02	16,212
Pritchard, Austin W., Ph.D. Dept. of Zoology	Acclimation of Fish to Pollution-related Low Oxygen	WP-00493-03	7,523

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LOCATION AND INVESTIGATOR	PROJECT TITLE	GRANT NO.	AMOUNT
OREGON (cont.)			
Oregon State University Corvallis			
Schroeder, Robert A., Sc.D. Forest Research Laboratory	Lignin Sulfonates in Pulp Mill Effluents	WP-00823-02	$ 19,808
Seaders, John, M.S. Dept. of Civil Engineering	Factors Influencing Stream Temperatures	WP-00684-03	12,915
Slotta, Larry S., Ph.D. Dept. of Civil Engineering	Stratified Reservoir Currents	WP-00983-01	28,551
Warren, Charles E., Ph.D. Dept. of Fisheries and Wildlife	Dissolved Oxygen Requirements of Freshwater Fish	WP-00135-10S1 WP-00135-11A1	4,880 30,448
Warren, Charles E., Ph.D. Dept. of Fisheries and Wildlife	Ecological Studies of an Experimental Stream	WP-00137-08	32,361
PENNSYLVANIA			
Academy of Natural Sciences Philadelphia			
Patrick, Ruth, Ph.D. Dept. of Limnology	The Effect of Specific Chemicals on Diatom Populations	WP-00475-03 WP-00475-03S1	28,499 54,759
Carnegie Institute of Technology Pittsburgh			
Bugliarello, George, Sc.D. Dept. of Civil Engineering	A Synthetic Computer Language for Sanitary Engineering	WP-00415-04	20,368
Drexel Institute of Technology Philadelphia			
Remson, Irwin, Ph.D. Dept. of Civil Engineering and Mechanics	Radial Flow of Soil Moisture	WP-00820-01A1	20,231
Lehigh University Bethlehem			
Coughlin, Robert W., Ph.D. Dept. of Chemical Engineering	Effect of Surface Groups on Adsorption of Pollutants	WP-00969-01	19,463
Parker, Basil W., Ph.D. Dept. of Biology	Thermal and Industrial Pollution; Delaware River	WP-00885-01	23,928

LOCATION AND INVESTIGATOR	PROJECT TITLE	GRANT NO.	AMOUNT
PENNSYLVANIA (cont.)			
Mellon Institute Pittsburgh			
Baker, Robert A. Dept. of Environmental Science	Phenolics in Aqueous Solution by GLC Analysis	WP-00957-01	$ 19,714
Pennsylvania Military Academy Chester			
Wise, Donald L., Ph.D. Dept. of Engineering	Diffusion Coefficients of Gases in Water	WP-00671-02	19,420
Pennsylvania State University University Park			
Lovell, Harold L., Ph.D. Dept. of Mineral Preparation	Sewage Effluent Purification by Interfacial Phenomena	WP-00424-03	_____*
Regional Science Research Institute Philadelphia			
Isard, Walter, Ph.D. President	Economics of Water Quality for a Regional System	WP-00938-01	67,475
University of Pittsburgh Pittsburgh			
Cummins, Kenneth W., Ph.D. Dept. of Biology	The Microdistribution of Stream Benthos	WP-00525-03 WP-00525-03S1	7,530 6,360
Shapiro, Maurice A., Ph.D. Dept. of Public Health Practices	Determination of Organic Matter in Water	WP-00473-03	_____*
RHODE ISLAND			
University of Rhode Island Kingston			
Conover, John T., Ph.D. Narragansett Marine Laboratory	Production of Pro- and Anti-Bacterials by Marine Algae	WP-00100-05	17,084
Conover, John T., Ph.D. Graduate School of Oceanography	The Effects of Pollution on Benthic Marine Plant Communities	WP-00755-02	21,821
Fish, Charles J., Ph.D. Graduate School of Oceanography	Environmental Relationships of Benthos in Salt Ponds	WP-00023-05	_____*

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LOCATION AND INVESTIGATOR	PROJECT TITLE	GRANT NO.	AMOUNT
RHODE ISLAND (cont.)			
University of Rhode Island Kingston			
Jeffries, Harry P., Ph.D. Graduate School of Oceanography	Chemical Responses by Marine Organisms to Stress	WP-00858-01	$ 37,062
SOUTH CAROLINA			
Clemson University Clemson			
Andrews, John F., Ph.D. Dept. of Civil Engineering	Growth Characteristics of the Methane Bacteria	WP-00622-03	18,168
Barlage, William B., Jr., Ph.D. Dept. of Chemical Engineering	The Effect of Surface-Active Agents on Gas Absorption	WP-00911-01	20,156
University of South Carolina Columbia			
Davis, Milton W., Jr., Ph.D. Dept. of Chemical Engineering	Purification of Industrial Wastes by Ion Exchange	WP-00595-02	23,003
Nelson, Bruce W., Ph.D. Dept. of Geology	Chemical Exchanges Across Sediment-Water Interfaces	WP-00651-03	52,800
SOUTH DAKOTA			
South Dakota School of Mines and Technology Rapid City			
Smith, Ross W. Dept. of Metallurgy	Adsorption of Surfactants on Selected Minerals	WP-00611-02	_____*
TENNESSEE			
University of Tennessee Knoxville			
Bunting, Dewey L., Ph.D. Dept. of Zoology and Entomology	Effects of Water Pollution on Zooplankton	WP-00927-01	15,802

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LOCATION AND INVESTIGATOR	PROJECT TITLE	GRANT NO.	AMOUNT
TENNESSEE (cont.)			
Vanderbilt University Nashville			
Fisher, Gerald T., Ph.D. Dept. of Chemical Engineering	Oxygen Absorption in Organic Aqueous Mixtures	WP-00871-02	$ 4,977
Krenkel, Peter A., Ph.D. Dept. of Civil Engineering	Turbulent Diffusion and River Waste Assimilative Capacity	WP-00328-05	31,900
Malaney, George W., Ph.D. Dept. of Civil Engineering	Activated Sludge as an Ecological System	WP-00816-01A1	19,668
Webb, M. Roger Dept. of Civil Engineering	Determination of Transition Zones in Settling Basins	WP-00039-04	_____*
TEXAS			
Baylor University Waco			
Davidson, Floyd F., Ph.D. Dept. of Biology	Toxic Properties of the Blue-Green Algae	WP-00002-11	4,752
Lubbock City-County Health Dept. Lubbock			
Cowgill, David M., M.D. City Health Department	Multipurpose Modification of Playa Sinks	WP-00029-04	_____*
North Texas State University Denton			
Schlichting, Harold E., Jr., Ph.D. Dept. of Biology	Effects of Domestic Pollution upon Periphyton	WP-00604-03	2,004
Silvey, Joseph K. G., Ph.D. Dept. of Biology	Naturally Occurring Tastes and Odors in Water Supplies	WP-00785-02	13,403
Silvey, Joseph K. G., Ph.D. Dept. of Biology	A Study of the Metabolism of the Aquatic Actinomycetes	WP-00805-02	18,896
Stewart, Kenneth M., Ph.D. Dept. of Biology	Dispersal of Viable Algae and Protozoa	WP-00855-01A1	10,320

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LOCATION AND INVESTIGATOR	PROJECT TITLE	GRANT NO.	AMOUNT
TEXAS (cont.)			
Texas A & M Research Foundation College Station			
Ray, Sammy M., Ph.D. Dept. of Oceanography and Meteorology	Conference on Pollution and Marine Ecology	WP-00900-01	$ _____*
Texas Agricultural Experiment Station, Texas A & M University College Station			
Smerdon, Ernest T., Ph.D. Water Resources Institute	Water Pollution from Eroded Sediments	WP-00757-02	24,375
Texas Research Foundation Renner			
Correll, Donovan S., Ph.D. Botanical Laboratory	Aquatic Plants of Polluted Waters in the S.W. United States	WP-00685-02	24,247
Texas Technological College Lubbock			
Grubb, Herbert W., Ph.D. Dept. of Agricultural Economics	Economics of Multipurpose Playa Lake Modification	WP-00775-01	6,066
University of Texas Austin			
Bold, Harold C., Ph.D. Dept. of Botany	An Investigation of Texas Soil Algae	WP-01057-06	38,976
Copeland, B. J., Ph.D. Institute of Marine Science	Effects of Rivers on the Metabolism of Texas Bays	WP-00811-01	24,680
Gloyna, Ernest F., Dr. Engr. Dept. of Civil Engineering	Effect of Toxic Organics on Waste Stabilization	WP-00688-02	10,977
Himmelblau, David M., Ph.D. Dept. of Chemical Engineering	Gas Transport through Monolayers on Reservoirs	WP-00652-03	10,680
Malina, Joseph F., Jr., Ph.D. Dept. of Civil Engineering	Amino Acid Formation in Anaerobic Sludge Digestion	WP-00083-03	_____*

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LOCATION AND INVESTIGATOR	PROJECT TITLE	GRANT NO.	AMOUNT
TEXAS(cont.)			
University of Texas Austin			
Maach, Frank D., Ph.D. Dept. of Civil Engineering	Mixing and Dispersion of Contaminants in Reservoirs	WP-00705-01A1	$ 28,878
Parker, Patrick L., Ph.D. Institute of Marine Science	Metabolism of Marine Bays of Texas	WP-00204-04	_____*
UTAH			
University of Utah Salt Lake City			
Gaufin, Arden R., Ph.D. Dept. of Zoology and Entomology	Bio-Assays of the Toxicity of Pesticides to Aquatic Invertebrates	WP-00003-11	10,836
Gaufin, Arden R., Ph.D. Dept. of Zoology and Entomology	Production of Taste and Odor Producing Algae in Reservoirs	WP-00334-03	6,192
Rees, Don M., Ph.D. Division of Biological Sciences	Multipurpose Management Techniques for Reusable Water	WP-00027-04	_____*
Utah State University Logan			
Neuhold, John M., Ph.D. Dept. of Wildlife Resources	Halide Water Quality Toxicity Effects on Fish	WP-00768-02	10,489
VIRGINIA			
Virginia Institute of Marine Science Gloucester Point			
Brehmer, Morris L., Ph.D. Dept. of Ecology-Pollution	Toxicity of Industrial Wastes to Marine Organisms	WP-00035-04	15,417
Virginia Polytechnic Institute Blacksburg			
Brandt, Warren W., Ph.D. Dept. of Chemistry	Determination of Synthetic Detergents	WP-00647-02	_____*

* Active 1966 - Supported by funds awarded in previous years

LOCATION AND INVESTIGATOR	PROJECT TITLE	GRANT NO.	AMOUNT
WASHINGTON			
University of Washington Seattle			
Anderson, George C., Ph.D. Dept. of Oceanography	Annual Phytoplankton Production in Puget Sound Waters	WP-00633-03	$ 38,566
Bevan, Donald E., Ph.D. Fisheries Research Institute	Estuarine Ecology as Related to Water Pollution	WP-00642-01A1	78,273
Carlson, Dale A., Ph.D. Dept. of Civil Engineering	Wastewater Odor Reduction Mechanisms in Soil Filters	WP-00883-01	35,653
Christman, Russell F., Ph.D. Dept. of Civil Engineering	The Nature of Organic Color in Water	WP-00538-02	_____*
English, Thomas S., Ph.D. Dept. of Oceanography	Distribution of Demersal Fishes in Inshore Waters	WP-00803-02	28,231
Gessel, Stanley P., Ph.D. College of Forestry	Influence of Forest Ecosystems on Water Quality	WP-00743-02	16,180
Katz, Max, Ph.D. College of Fisheries	Sublethal Amounts of Organic Insecticides and Fish	WP-00956-01	29,496
McCarthy, Joseph L., Ph.D. Dept. of Chemical Engineering	Unique Determination of Lignin Sulfonates in Water	WP-00627-03	13,165
McCarthy, Joseph L., Ph.D. Dept. of Chemical Engineering	Studies of Low Molecular Weight Lignin Sulfonates	WP-00628-02	11,739
Nece, Ronald E., Sc.D. Dept. of Civil Engineering	Salt Water Entrainment for Dilution in Sewer Outfalls	WP-00512-03	11,249
Scott, David R. M., Ph.D. College of Forestry	Transpirational Use of Water by High Altitude Forests	WP-00720-02	12,580
Smith, Lynwood S., Ph.D. Fisheries Research Institute	Responses of Fish to Environmental Stresses	WP-01056-01	28,403
Taub, Frieda B., Ph.D. College of Fisheries	Biological Models of Freshwater Communities	WP-00982-01	27,415
Washington State University Pullman			
Hindin, Ervin, M.S. Div. of Industrial Research	Water Reclamation by Reverse Osmosis	WP-00624-03	19,534

* Active 1966 - Supported by funds awarded in previous years

LOCATION AND INVESTIGATOR	PROJECT TITLE	GRANT NO.	AMOUNT
WASHINGTON (cont.)			
Washington State University Pullman			
Hindin, Erwin, M.S. Div. of Industrial Research	Occurrence of Pesticides in Aquatic Environments	WP-00676-03	$ 34,732
May, Donald S., M.S. College of Engineering	The Ecology of Chromatium in Sewage Ponds	WP-00727-02	17,492
Parker, Richard A., Ph.D. Dept. of Zoology	Some Aspects of Microcrustacean Phosphate Metabolism	WP-00903-03	13,440
Stahl, John B., Ph.D. Div. of Industrial Research	The Effects of the Benthos on Decomposition	WP-00668-02	11,245
Stokes, J. L., Ph.D. Dept. of Bacteriology and Public Health	The Biology and Chemistry of Sphaerotilus	WP-00139-05	_____*
WEST VIRGINIA			
West Virginia University Morgantown			
Corcoscer, Vincent F., Ph.D. Dept. of Microbiology	Studies on Aquatic Stalked Bacteria	WP-00815-03	10,344
Wen, C. Y., Ph.D. Dept. of Chemical Engineering	Mass Transfer and Chemical Reaction in Water Pollution	WP-00699-02	17,706
WISCONSIN			
Marquette University Milwaukee			
Zanoni, Alphonse E., Ph.D. Dept. of Civil Engineering	Effluent Deoxygenation at Different Temperatures	WP-00829-01	12,119
University of Wisconsin Madison			
Blum, John L., Ph.D. Dept. of Botany	Response of Tolerant Organisms to Specific Pollutants	WP-00857-02	12,142
Chesters, Gordon, Ph.D. Dept. of Soils	Herbicide Removal Processes in Soil	WP-00751-02	29,727

* Active 1966 - Supported by funds awarded in previous years

LOCATION AND INVESTIGATOR	PROJECT TITLE	GRANT NO.	AMOUNT
WISCONSIN (cont.)			
University of Wisconsin Madison			
Fitzgerald, George P., Ph.D. Hydraulic and Sanitary Laboratory	Detection of Limiting and Surplus Nutrients in Algae	WP-00297-05	$ 24,150
Hilsenhoff, William L. Dept. of Entomology	Biological Factors in the Management of Lake Flies	WP-00209-04A1	_____*
Lee, G. Fred, Ph.D. Dept. of Civil Engineering	Concentration of Organic Solutes in Water	WP-00371-02	22,450
Rohlich, Gerard A., Ph.D. Dept. of Civil Engineering	Glucose Utilization by Pure and Mixed Cultures	WP-00061-03	_____*
Rohlich, Gerard A., Ph.D. Dept. of Civil Engineering	Investigations of Zoogleal Flocs	WP-00905-01	39,496
Villemonte, James R., Ph.D. Dept. of Civil Engineering	Hydraulic Characteristics of Circular Sedimentation Basins	WP-00183-06 WP-00183-06S1	_____* 3,816
Weckel, Kenneth G., Ph.D. Dept. of Dairy and Food Industries	Cannery In-Plant Waste Losses and their Control	WP-00535-03	10,540
FOREIGN			
AUSTRALIA			
Melbourne Water Science Institute Melbourne			
Parker, Cecil David Director	Function of Solids in Lagoon Treatment of Sewage	WP-00321-04	14,450
University of Sydney Sydney			
Hawke, John G., Ph.D. Dept. of Pharmacy	Effect of Surface Films on Gases Dissolved in Water	WP-00877-01	10,850
CANADA			
British Columbia Research Council Vancouver, British Columbia			
Walden, Cecil C., Ph.D. Dept. of Applied Biology	Studies on Acidophilic Chemautotrophic Bacteria	WP-00550-01	19,620

*Active 1966 - Supported by funds awarded in previous years

LOCATION AND INVESTIGATOR	PROJECT TITLE	GRANT NO.	AMOUNT
FOREIGN (cont.)			
CANADA (cont.)			
University of Toronto Toronto, Ontario			
Brinkhurst, Ralph O., Ph.D. Dept. of Zoology	Taxonomy and Biology of Tubificidae (Sludge Worms)	WP-00940-01	$ 20,140
ENGLAND			
University College London			
Ives, Kenneth J., Ph.D. Dept. of Civil Engineering	Multilayer Filtration	WP-00832-01	4,673
University of Liverpool Liverpool			
Brinkhurst, Ralph O., Ph.D. Dept. of Zoology	Taxonomy and Biology of Tubificidae (Sludge Worms)	WP-00521-02	_____*
JAPAN			
Okayama University Tsushima, Okayama City			
Kobayashi, Jun, Dr.Sc. Ohara Institute for Agricultural Biology	Strange Osteomalacia by Pollution from Cadmium Mining	WP-00359-04	6,522

* Active 1966 - Supported by funds awarded in previous years

WATER POLLUTION CONTROL

DEMONSTRATION GRANTS FISCAL YEAR 1966

SUMMARY OF GRANT AWARDS BY STATES

State	Institutions and Agencies	Number Awarded	Amount Awarded
Arizona	1	1	$ 106,696
California	9	9	540,444
Colorado	1	1	22,847
District of Columbia	3	3	149,519
Florida	1	1	84,790
Illinois	2	2	192,900
Indiana	1	1	22,702
Kansas	1	1	26,530
Louisiana	1	1	16,507
Maryland	1	2	70,182
Massachusetts	1	1	19,827
Michigan	1	1	127,722
Minnesota	2	2	46,448
Missouri	1	1	54,136
New Jersey	2	2	118,919
New York	4	4	279,970
North Dakota	1	1	15,000
Ohio	2	2	70,003
Oklahoma	1	1	12,340
Oregon	1	1	56,299
Pennsylvania	1	1	63,392
Utah	1	1	35,690
Washington	1	1	12,461
West Virginia	1	1	19,332
24 States	41	42	$2,164,656

Active Demonstration Grants 1966

25 States
46 Institutions and Agencies
51 Demonstration Grants

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WATER POLLUTION CONTROL

DEMONSTRATION GRANTS

FISCAL YEAR 1966

LOCATION AND PROJECT DIRECTOR	PROJECT TITLE	GRANT NO.	AMOUNT
ARIZONA			
Department of Water and Sewers Tucson			
Beermann, Paul Director	Tucson Wastewater Reclamation Project	WPD 108-02(R1)66	$106,696
CALIFORNIA			
City & County of San Francisco San Francisco			
Geertz, Clifford City Engineer	Feasibility of Control Measures for Treatment of Overflows from Combined Sewers	WPD 112-01-66	99,820
City of San Jose San Jose			
Belick, Frank M. Engineer-Superintendent	Reducing Waste Activated Sludge Volume by Anaerobiosis	WPD 129-01-66	48,060
County of Sonoma Santa Rosa			
Head, Donald B. Sanitation Engineer	Evaluation of External Sealing Method to Reduce Infiltration in Sewage Systems	WPD 111-01-66	29,845
Eastern Municipal Water District Hemet			
Boen, Doyle F. General Manager and Chief Engineer	Reutilization of Wastewater Recycled through Ground Water	WPD 81-02(R1)66	49,800
Engineering-Science, Inc. Oakland			
Ludwig, Harvey F. President	Improved Waste Treatment Design of Submarine Disposal	WPD 12-02-64	_____*
Lake Tahoe Area Council Al Tahoe			
McGauhey, P. H. Chairman, Board of Consultants	Demonstration Project on Eutrophication of Surface Waters - Lake Tahoe	WPD 48-01(R1)66	74,000

*Active 1966 - Supported by funds awarded in previous years

LOCATION AND PROJECT DIRECTOR	PROJECT TITLE	GRANT NO.	AMOUNT
CALIFORNIA			
Los Angeles County Los Angeles			
Lambie, John A. County Engineer	Wastewater Reclamation Project for Antelope Valley	WPD 50-03-66	$ 46,000
Orange County Water District Santa Ana			
Owen, Langdon W. District Engineer	Reclamation of Wastewaters for Injection Underground	WPD 110-01(R1)66	66,760
South Tahoe Public Utility District, Bijou			
Friday, W. F. Manager	Plant-Scale Regeneration of Granular Activated Carbon	WPD 84-01-65 WPD 84-01(S1)66	* 7,530
Friday, W. F. Manager	Coagulant Recovery, Nitrogen Removal, and Carbon Regeneration in Wastewater Reclamation	WPD 85-02-66	72,395
Friday, W. F. Manager	Denitrification and Ion Exchange for Nitrogen Removal from Sewage	WPD 86-01-65	*
Stanford University Stanford			
Eliassen, Rolf Prof. of Civil Engineering	Reclamation of Reusable Water from Sewage	WPD 21-04-66	46,234
Strandberg, Carl H., Individual Freemont	Aerial Water Quality Reconnaissance Demonstration	WPD 20-03-65	*
University of Southern California Los Angeles			
Tibby, Richard B., Ph.D. Professor of Biology	Feasibility of Waste Disposal in the Marine Environment	WPD 1-04(R2)65	*
COLORADO			
Beet Sugar Development Fdn. Fort Collins			
Fischer, James H. Manager	Treatment of Beet Sugar Wastes in Facultative and Algae Ponds	WPD 93-02-66	22,847
DISTRICT OF COLUMBIA			
League of Women Voters Education Fund			
Whittemore, Arthur E., (Mrs.) Trustee, Chairman of Water Resources Projects	Schools for Citizens on the Use of Water for Tomorrow's Living	WPD 62-03-66	10,580

*Active 1966 - Supported by funds awarded in previous years

LOCATION AND PROJECT DIRECTOR	PROJECT TITLE	GRANT NO.	AMOUNT
DISTRICT OF COLUMBIA (cont.)			
National Association of Counties Research Fdn.			
Hillenbrand, Bernard F. Executive Director	Public Officials Water Pollution Control Demonstration Project	WPD 55-03-66 WPD 55-03(S1)66	$ 99,000 28,139
Water Pollution Control Federation			
Burke, George W., Manager of Technical Services	Development of Lecture Guides for Wastewater Treatment Plant Operators	WPD 45-01-66	11,800
FLORIDA			
University of Florida Gainesville			
Black, A. P., Ph.D. Research Professor of Chemistry and Sanitary Science	Disinfectant and Physiological Effects of Iodine for Treatment of Polluted Water Supplies	WPD 19-04-66	84,790
Kiker, John E., Jr., Dept. of Civil Engineering	A Study of Estuarine Water Pollution Problems	WPD 15-03-64	_____*
ILLINOIS			
Izaak Walton League of America Chicago			
Penfold, Joseph W. Conservation Director	Citizen Workshops on Clean Waters for America	WPD 128-01-66	52,900
Metropolitan Sanitary District Chicago			
Kaplovsky, A. Joel Ph.D. Director of Laboratories	Solids Concentration by Centrifuging and Centrate Utilization	WPD 77-01-65	_____*
Mickle, C. T. Chief Engineer	Chicago Tunnel Drainage Project to Control Urban Stormwater Pollution	WPD 106-01-66	140,000
INDIANA			
University of Notre Dame West Bend			
Tenney, Mark W. Dept. of Environmental Health	Effect of Domestic Pollution Abatement on an Eutrophic Lake	WPD 126-01-66	22,702
KANSAS			
University of Kansas Lawrence			
Loehr, Raymond C. Dept. of Civil Engineering	Treatment of Cattle Feedlot Wastes in Oxidation Ponds	WPD 123-01-66	26,530

*Active 1966 - Supported by funds awarded in previous years

LOCATION AND PROJECT DIRECTOR	PROJECT TITLE	GRANT NO.	AMOUNT
LOUISIANA			
Tulane University New Orleans			
Macdonald, Frank W. Prof. of Civil Engineering and Sanitation	Bedding and Infiltration Studies of Sanitary Sewers of Gulf Coast Area	WPD 80-02-66	$ 16,507
MARYLAND			
The Johns Hopkins University Baltimore			
Liebman, Jon C. Dept. of Environmental Engineering Science	Optimization of Regional Waste Treatment Facilities	WPD 125-01-66	22,588
Renn, Charles E. Prof. of Sanitary Engineering	Reuse of Industrial Wastewater by Management of Recycling Ponds	WPD 117-01-66	47,594
MASSACHUSETTS			
Massachusetts Health Research Institute, Inc. Boston			
Tompkins, William A. Chief Aquatic Biologist	Massachusetts Pesticide Monitoring Demonstration	WPD 88-02-66	19,827
MICHIGAN			
University of Michigan Ann Arbor			
Goodman, Brian L. National Sanitation Fdn.	Development of Criteria for Packaged Compact Sewage Treatment Plants	WPD 74-02-66 WPD 74-02(S1)66	90,600 37,122
MINNESOTA			
Minnesota State Department of Health Minneapolis			
Bauer, Henry Deputy Executive Officer	Demonstration of the "Channel Aeration Process" in Treatment of Sewage	WPD 33-02-66	31,608
St. Mary's College Winona			
McNabb, C. D. Dept. of Biology	Demonstration Project for Undergraduate Training of Hydrobiologists in Water Pollution Control	WPD 144-01-66	14,840

LOCATION AND PROJECT DIRECTOR	PROJECT TITLE	GRANT NO.	AMOUNT
MISSOURI			
Water and Sewage Technical School, Neosho			
Caughran, Lloyd Director	Demonstration School for Training Water and Sewerage System Operators	WPD 2-05-66 WPD 2-05(S1)66	$ 34,711 19,425
NEBRASKA			
University of Nebraska Lincoln			
Engelhard, Warren E., Ph.D. Dept. of Microbiology	Effect of Microbial Flora on Resins in Water Softening and on Water Pollution	WPD 72-01-64	_____*
NEW JERSEY			
Delaware River Basin Commission Trenton			
Wright, James F. Executive Director	Interstate Regional Planning for Water Supply and Waste Disposal	WPD 136-01-66	98,919
Division of Fish and Game Bureau of Fisheries Management Trenton			
Pyle, A. Bruce Principal Fisheries Biologist	Fish and Aquatic Life Consideration in New Jersey's Water Pollution Abatement Program	WPD 4-05-66	20,000
NEW YORK			
American Society of Civil Engineers New York City			
Taylor, Donald C. Research Manager	Separation of Sanitary Sewage from Combined Systems of Sewerage	WPD 104-01-66	89,700
County of Nassau Mineola			
Simins, Herbert J. Commissioner of Public Works	Water Conservation by Wastewater Reclamation and Injection for Recharge	WPD 71-02(R1)66	130,450

*Active 1966 - Supported by funds awarded in previous years

LOCATION AND PROJECT DIRECTOR	PROJECT TITLE	GRANT NO.	AMOUNT
NEW YORK (Cont.)			
County of Westchester White Plains			
Brown, James M. Superintendent, Sewage Treatment	Effect of Polymers on the Dewatering of Sewage Sludge	WPD 47-03-66	$ 5,750
New York State Department of Health Albany			
Stevens, Donald B. Chief, Research Unit	Treatment Required by Sewage for Injection-Well Recharge	WPD 83-02-66	54,070
NORTH DAKOTA			
North Dakota State Department of Health Bismarck			
Van Heuvelen, Willis Chief of Environmental Health and Engineering Services	Treatment of Waste from the Manufacture of Potato Starch by Anaerobic Fermentation-Aerobic Stabilization	WPD 94-02-66	15,000
OHIO			
City of Dayton Dayton			
Tossey, DeFro Superintendent of Sewage Treatment	Tertiary Treatment by Flocculation and Rapid Sand Filtration	WPD 114-01-66	25,567
Ohio State University Athens			
Kaneshige, Harry M. Dept. of Civil Engineering	Operational Demonstration of Oxidation Ditch Method of Waste Treatment	WPD 100-01(R1)66	44,436
OKLAHOMA			
University of Oklahoma Research Institute Norman			
Reid, George W. Professor of Civil Engineering	Development of Criteria for the Removal of Nitrogen and Phosphorus by Bio-Oxidation Ponds	WPD 7-03-65	____*

*Active 1966 - Supported by funds awarded in previous years

LOCATION AND PROJECT DIRECTOR	PROJECT TITLE	GRANT NO.	AMOUNT
OKLAHOMA (Cont.)			
University of Oklahoma Research Institute Norman			
Reid, George W. Prof. of Civil Engineering	Demonstrating the Effect of Nutrients from Oxidation Ponds in Receiving Streams	WPD 98-01-66	$ 12,340
OREGON			
Oregon State University Corvallis			
Burgess, Frederick J. Dept. of Civil Engineering	Water Reuse Quantity-Quality Effect on Treatment Process	WPD 90-02-66 WPD 90-02(S1)66	40,988 15,311
PENNSYLVANIA			
Pennsylvania State University University Park			
Farrell, Michael A. Director, Agricultural Experiment Station	Renovation of Sewage Effluent for Reuse as a Water Resource	WPD 95-02-66	63,392
UTAH			
Utah State University Logan			
Bagley, Jay M. Dept. of Civil Engineering	Application of Sequential Water Use Theory Within a Hydrologic Complex	WPD 17-01(R1)66	35,690
WASHINGTON			
University of Washington Seattle			
Oglesby, Ray T. Dept. of Sanitary Biology	Dilution Effects on Nutrients and Productivity in Receiving Waters	WPD 38-02-66	12,461
WEST VIRGINIA			
West Virginia University Morgantown			
Burchinal, J. C. Dept. of Civil Engineering	A Study of the Oxidation Ditch Method of Waste Treatment	WPD 36-02-66	19,332

WATER POLLUTION CONTROL

TRAINING GRANTS FISCAL YEAR 1966

SUMMARY OF GRANTS AWARDED BY STATES

State	Institutions and Agencies	Number Awarded	Amount Awarded
Arizona	1	1	$ 35,090
Arkansas	1	1	24,681
California	3	4	150,036
Colorado	2	2	68,171
Georgia	1	1	46,047
Hawaii	1	1	18,935
Illinois	1	1	46,842
Indiana	1	1	14,864
Iowa	1	1	17,072
Kansas	1	1	56,189
Kentucky	1	1	25,075
Maine	1	1	36,632
Maryland	1	1	25,732
Massachusetts	2	2	68,124
Michigan	2	3	140,836
Minnesota	1	1	8,881
Mississippi	1	1	32,771
Missouri	1	2	78,615
Montana	1	1	50,884
New Jersey	1	1	31,212
New Mexico	1	1	20,300
New York	3	5	231,181
North Carolina	2	2	62,918
Ohio	3	3	69,397
Oklahoma	2	3	99,741
Oregon	1	4	242,019
Pennsylvania	1	2	88,714
South Carolina	1	2	81,281
South Dakota	1	1	34,259
Tennessee	1	1	52,036
Texas	4	4	159,370
Utah	1	1	30,002
Virginia	1	1	43,655
Washington	2	2	45,563
West Virginia	1	1	36,184
Wisconsin	1	4	226,689
36 States	51	65	$2,499,998

Active Training Grants 1966

36 States
51 Institutions and Agencies
67 Training Grants

WATER POLLUTION CONTROL

TRAINING GRANTS

FISCAL YEAR 1966

LOCATION AND PROGRAM DIRECTOR	PROGRAM TITLE	GRANT NO.	AMOUNT
ARIZONA			
University of Arizona Tucson			
Mees, Quintin M. Dept. of Civil Engineering	Training in Water Management, Development and Reuse	1T1-WP-92-01A1	$ 35,090
ARKANSAS			
University of Arkansas Fayetteville			
Heiple, Loren R., Ph.D. Dept. of Civil Engineering	Water Supply and Water Pollution Control Specialist Training	5T1-WP-85-02	24,681
CALIFORNIA			
San Jose State College San Jose			
Agardy, Franklin J., Ph.D. Dept. of Civil Engineering	Graduate Training in Water Quality Control	5T1-WP-66-03 3T1-WP-66-02S2	22,538 1,302
Stanford University Stanford			
Eliassen, Rolf Ph.D. Dept. of Civil Engineering	Interdisciplinary Management of Water Resources and Water Quality	5T1-WP-38-04	62,311
Kruger, Paul Ph.D. Dept. of Civil Engineering	Use of Radioisotope Techniques in Water Pollution Control	5T1-WP-9-05	42,500
University of California Davis			
Scott, Verne H., Ph.D. Dept. of Water Science and Engineering	Irrigation Effects on Control of Water Pollution	5T1-WP-7-05	21,385

LOCATION AND PROGRAM DIRECTOR	PROGRAM TITLE	GRANT NO.	AMOUNT
COLORADO			
Colorado State University Fort Collins			
Morrison, S. M., Ph.D. Dept. of Microbiology	Graduate Training in Water Microbiology	1T1-WP-127-01	$ 36,485
University of Colorado Boulder			
Flack, J. Ernest, Ph.D. Dept. of Civil Engineering	Interdisciplinary Education of Water Quality Management Engineers	1T1-WP-105-01	31,686
GEORGIA			
Georgia Institute of Technology Atlanta			
Kindsvater, Carl E., Ph.D. Water Resources Center	Water Quality and Resources Engineering	5T1-WP-62-03	46,047
HAWAII			
University of Hawaii Honolulu			
Burbank, Nathan C., Sc.D. Dept. of Civil Engineering	Pacific Island Sanitary Engineering	5T1-WP-69-03	18,935
ILLINOIS			
University of Illinois Urbana			
Engelbrecht, R. S., Ph.D. Dept. of Civil Engineering	Training in Water Quality and Pollution Control	1T1-WP-128-01	46,842
INDIANA			
Purdue University Lafayette			
Bloodgood, Don E., Prof. Dept. of Civil Engineering	Engineering and Design of Water Pollution Control Facilities	5T1-WP-13-05	14,864
IOWA			
Iowa State University of Science and Technology Ames			
Baumann, Robert E., Ph.D. Dept. of Civil Engineering	Chemistry of Waste Treatment Including Nuclear Wastes	5T1-WP-45-04	17,072

LOCATION AND PROGRAM DIRECTOR	PROGRAM TITLE	GRANT NO.	AMOUNT
KANSAS			
University of Kansas Lawrence			
McKinney, Ross E., Sc.D. Dept. of Civil Engineering	Water Research and Training	5T1-WP-50-03	$ 56,189
KENTUCKY			
University of Kentucky Lexington			
Lauderdale, Robert A., Ph.D. Dept. of Civil Engineering	Water Resources and Sanitary Engineering	5T1-WP-64-03	25,075
MAINE			
University of Maine Orono			
Sproul, Otis J., Sc.D. Dept. of Civil Engineering	Training Program in Water Pollution Microbiology	5T1-WP-17-05	36,632
MARYLAND			
The Johns Hopkins University Baltimore			
Wolman, M. Gordon, Ph.D. Dept. of Sanitary Engineering and Water Resources	Water Science and Management	5T1-WP-51-04	25,732
MASSACHUSETTS			
Tufts University Medford			
Hanes, N. Bruce, Ph.D. Dept. of Civil Engineering	Water Pollution Control and Public Health Engineering	5T1-WP-40-04 3T1-WP-40-0451	35,604 2,413
University of Massachusetts Amherst			
Feng, Tsuan Hua, Ph.D. Dept. of Civil Engineering	Water Quality and Quantity Engineering	5T1-WP-77-02 3T1-WP-77-0281	22,029 8,078
MICHIGAN			
Michigan State University East Lansing			
Roelofs, Eugene W., Ph.D. Dept. of Fisheries and Wildlife	Graduate Training of Pollution Biologists	1T1-WP-109-01	32,000

LOCATION AND PROGRAM DIRECTOR	PROGRAM TITLE	GRANT NO.	AMOUNT
MICHIGAN (cont.)			
University of Michigan Ann Arbor			
Lagler, Karl F., Ph.D. Dept. of Fisheries	Physiological Action of Water Pollutants	5T1-WP-16-05	$ 25,576
Velz, Clarence, Prof. Dept. of Environmental Health	Training in Water Pollution Control and Public Health	5T1-WP-15-05	83,260
MINNESOTA			
University of Minnesota Minneapolis			
Olson, Theodore A., Ph.D. School of Public Health	Training in Water Quality Field Investigation Techniques	1T1-WP-95-01	8,881
Schroepfer, George J., Ph.D. Dept. of Civil Engineering	Sanitary Engineering and Water Resources Program	5T1-WP-33-04	_____*
MISSISSIPPI			
Mississippi State University State College			
Williford, Howard K., Prof. Dept. of Civil Engineering	Waste Water Disposal Engineering Training Program	1T1-WP-108-01	32,771
MISSOURI			
University of Missouri Columbia			
Ray, Arliss D., Ph.D. Dept. of Civil Engineering	Water Quality Engineering	5T1-WP-30-03 3T1-WP-30-03S1	31,592 14,898
University of Missouri Rolla			
Grigoropoulos, S. G., Sc.D. Dept. of Civil Engineering	Water and Waste Water Engineering	1T1-WP-86-01A1	32,125
MONTANA			
Montana State College Bozeman			
Wright, John C., Ph.D. Dept. of Botany and Bacteriology	Physical and Chemical Aspects of Water Pollution	5T1-WP-1-05	50,884

* Active 1966 - Supported by funds awarded in previous years

LOCATION AND PROGRAM DIRECTOR	PROGRAM TITLE	GRANT NO.	AMOUNT
NEW JERSEY			
Rutgers-The State University New Brunswick			
Heukelekian, Hovhaness, Ph.D. Dept. of Environmental Sciences	Water Sanitation	5T1-WP-43-04	$ 31,212
NEW MEXICO			
New Mexico State University University Park			
Clark, John W., Prof. Dept. of Civil Engineering	Water Resources Planning and Conservation	5T1-WP-48-04	20,300
NEW YORK			
Cornell University Ithaca			
Falkson, Louis, Ph.D. Dept. of Economics	Training in Economic Aspects of Water Pollution	5T1-WP-4-05	19,694
Gates, Charles D., Prof. School of Civil Engineering	Sanitary Engineering and Water Resources Program	5T1-WP-3-05 3T1-WP-3-0481	39,595 15,012
Lynn, Walter R., Ph.D. School of Civil Engineering	Systems Engineering in Water Pollution Control	5T1-WP-42-03	_____*
Manhattan College New York			
O'Connor, Donald J., Sc.D. Dept. of Civil Engineering	Summer Institute in Water Supply and Pollution Control	5T1-WP-32-04	20,258
Jeris, John S., Sc.D. Dept. of Civil Engineering	Training of Professional Specialists in Water Pollution Control	5T1-WP-26-05	78,770
New York University New York City			
Dobbins, William E., Ph.D. Dept. of Civil Engineering	Water Supply and Water Pollution Control Engineering	5T1-WP-24-05 3T1-WP-24-0581	49,140 8,712
NORTH CAROLINA			
North Carolina State University Raleigh			
Smallwood, Charles, Jr., Prof. Dept. of Civil Engineering	Graduate Training of Water and Waste Treatment Engineers	5T1-WP-68-03	27,504

*Active 1966 - Supported by funds awarded in previous years

LOCATION AND PROGRAM DIRECTOR	PROGRAM TITLE	GRANT NO.	AMOUNT
NORTH CAROLINA (cont.)			
University of North Carolina Chapel Hill			
Weiss, Charles M., Ph.D. Dept. of Environmental Science and Engineering	Training Program in Water Pollution Control Engineering	5T1-WP-6-05	$ 35,414
OHIO			
Ohio State University Columbus			
Dambach, Charles A., Ph.D. National Resources Institute	Interdisciplinary Water Resources Training	5T1-WP-39-03	24,323
University of Cincinnati Cincinnati			
Eye, J. David, Sc.D. Dept. of Civil Engineering	Research Training and the Aquatic Environment	5T1-WP-46-03	25,312
University of Toledo Toledo			
Bennett, Gary F., Ph.D. Dept. of Chemical Engineering	Bioengineering Training in Water Pollution Control	1T1-WP-94-01	19,762
OKLAHOMA			
Oklahoma State University Stillwater			
Norris, Troy C., Ph.D. Dept. of Zoology	Program for Aquatic Biology Specialists in Water Pollution	5T1-WP-23-05	46,283
Gaudy, Anthony F., Jr., Ph.D. School of Civil Engineering	Bioengineering Training in Water Pollution Control	5T1-WP-19-05	34,455
University of Oklahoma Norman			
Reid, George W., Prof. Dept. of Civil Engineering	Water Resource Development Training Program	5T1-WP-29-04	19,003
OREGON			
Oregon State University Corvallis			
Burgess, [illegible] A., Ph.D. Dept. of Civil Engineering	Engineering Control of Waste Water Disposal Training Program	5T1-WP-25-05	70,023
Castle, Emery N., Ph.D. Dept. of Agriculture Economics	Water Pollution Economics	5T1-WP-71-03	13,811

LOCATION AND PROGRAM DIRECTOR	PROGRAM TITLE	GRANT NO.	AMOUNT
OREGON (cont.)			
Oregon State University Corvallis			
Curl, Herbert, Jr., Ph.D. Dept. of Oceanography	Training of Estuarine Specialists in Water Quality	1T1-WP-111-01	$109,476
Warren, Charles E., Ph.D. Dept. of Fish and Game Management	Freshwater and Marine Pollution Biology Program	5T1-WP-52-04 3T1-WP-52-03S1	39,703 9,006
PENNSYLVANIA			
University of Pittsburgh Pittsburgh			
Miller, James P., Jr., Ph.D. Dept. of Civil Engineering	Water Resources and Water Pollution Control Engineering	5T1-WP-41-04	43,329
Tryon, C. A., Ph.D. Pymatuning Laboratory of Field Biology	Graduate Training in Aquatic Ecology	1T1-WP-83-01	45,385
SOUTH CAROLINA			
Clemson University Clemson			
Rich, Linvil G., Ph.D. College of Engineering	Summer Institute in Process Engineering of Waste Water Treatment	5T1-WP-5-05	12,056
Rich, Linvil G., Ph.D. College of Engineering	Graduate Program in Process Engineering of Waste Water Treatment	5T1-WP-8-05	69,225
SOUTH DAKOTA			
South Dakota State University Brookings			
Dornbush, James N., Sc.D. Dept. of Civil Engineering	Water Resources and Sanitary Engineering	5T1-WP-93-02	34,259
[illegible]			
Vanderbilt University Nashville			
Krenkel, Peter A., Ph.D. Dept. of Civil Engineering	Sanitary Engineering Training Program	5T1-WP-34-04 3T1-WP-34-03S1	43,036 9,000

LOCATION AND PROGRAM DIRECTOR	PROGRAM TITLE	GRANT NO.	AMOUNT
TEXAS			
North Texas State University Denton			
Silvey, J. K. G., Ph.D. Dept. of Biology	Training of Water Quality Microbiologists	1T1-WP-107-01A1	$ 16,953
Texas A & M University College Station			
Hann, Roy W., Ph.D. Dept. of Sanitary Engineering	Petro-Chemical Waste Abatement	5T1-WP-74-03	39,360
University of Texas Austin			
Gloyna, Ernest F., Ph.D. Dept. of Civil Engineering	Water Resources and Water Pollution Control Training Program	5T1-WP-20-05	27,454
William Marsh Rice University Houston			
Busch, Arthur W., Prof. Dept. of Chemical Engineering	Chemical Engineering Training in Water Pollution Control Processes	2T1-WP-44-04	75,603
UTAH			
University of Utah Salt Lake City			
Gaufin, Arden R., Ph.D. Dept. of Zoology and Entomology	Limnology and Sanitary Biology Aspects of Water Pollution	5T1-WP-54-04	30,002
VIRGINIA			
Virginia Polytechnic Institute Blacksburg			
Parsons, William A., Ph.D. Dept. of Civil Engineering	Graduate Training in Water Pollution Technology	5T1-WP-[illegible]	43,655
WASHINGTON			
University of Washington Seattle			
Sylvester, Robert O., Prof. Dept. of Civil Engineering	Graduate Training of Water Quality Engineers	1T1-WP-122-01	33,801

LOCATION AND PROGRAM DIRECTOR	PROGRAM TITLE	GRANT NO.	AMOUNT
WASHINGTON (cont.)			
Washington State University Pullman			
Dunstan, Gilbert H., Prof. Dept. of Civil Engineering	Water Pollution Control and Waste Water Disposal Engineering	5T1-WP-11-05	$ 11,762
WEST VIRGINIA			
West Virginia University Morgantown			
Burchinal, Jerry C., Ph.D. Dept. of Civil Engineering	Water Supply and Waste Control	5T1-WP-72-03 3T1-WP-72-0381	35,856 328
WISCONSIN			
University of Wisconsin Madison			
Clarenbach, Fred A., Ph.D. Dept. of Civil Engineering	Water Resources Management	5T1-WP-60-03	58,391
Hasler, Arthur D., Ph.D. Dept. of Zoology	Training Program for Aquatic Scientists in Hydrobiology	5T1-WP-2-05	49,500
Lee, G. Fred, Ph.D. Dept. of Civil Engineering	Training Program in Water and Water Pollution Chemistry	5T1-WP-22-05	91,517
Polkowski, Lawrence B., Ph.D. Dept. of Civil Engineering	Water and Waste Water Control Engineering	1T1-WP-132-01	27,281

WATER POLLUTION CONTROL

RESEARCH FELLOWSHIPS FISCAL YEAR 1966

SUMMARY OF AWARDS BY STATES

State	Institutions and Agencies	Number Awarded	Amount Awarded
Arizona	1	1	$ 1,699
California	2	17	112,394
Colorado	2	5	28,175
Georgia	1	3	17,969
Idaho	1	1	3,150
Illinois	2	3	16,169
Indiana	1	1	2,517
Iowa	2	7	41,748
Kansas	1	2	11,900
Kentucky	1	1	5,800
Maryland	2	2	13,505
Massachusetts	2	3	18,030
Michigan	2	11	64,900
Missouri	2	3	19,738
New York	2	4	31,310
North Carolina	1	2	14,100
Ohio	1	1	3,720
Oklahoma	2	4	26,041
Oregon	1	5	33,885
Pennsylvania	1	1	6,100
Rhode Island	1	1	10,355
South Carolina	1	7	38,681
Tennessee	2	2	13,134
Texas	1	1	5,185
Utah	2	6	39,727
Virginia	1	2	12,600
Washington	1	2	13,200
Wisconsin	1	14	90,094
Foreign	1	1	14,123
28 States	41	113	$ 709,999

Active Research Fellowships 1966

29 States 6 Foreign Countries
55 Institutions and Agencies
158 Research Fellowships

WATER POLLUTION CONTROL

RESEARCH FELLOWSHIPS

FISCAL YEAR 1966

LOCATION AND RECIPIENT	PROJECT TITLE	NUMBER	AMOUNT
ARIZONA			
University of Arizona Tucson			
Dea, Stanley J. Dept. of Civil Engineering	Continuous High Rate Loadings of Anaerobic Digesters	5-F1-WP-20,356-03	$ 1,699
CALIFORNIA			
California Institute of Technology Pasadena			
Collins, Ralph P. Dept. of Biology	Chemical Substances Produced by Taste and Odor Microorganisms	1-F3-WP-24,122-01	_____*
Stanford University Stanford			
Atkins, Patrick R. Dept. of Civil Engineering	Effects of Nuclear Explosions on Groundwater Quality	1-F1-WP-33,496-01	5,600
Barber, Richard T. Dept. of Biological Sciences	The Dissolved Organic Carbon Cycle in Seawater	1-F1-WP-31,099-01A1	6,100
Bruch, John C. Dept. of Civil Engineering	The Dispersion of Pollutants in Flow through Porous Media	5-F1-WP-21,610-03	5,300
Foree, Edward G. Dept. of Civil Engineering	Effects of Bottom Deposits on Water Quality	1-F1-WP-26,177-01	5,600
Haskell, Broderick F. Dept. of Civil Engineering	Secondary Benefits Evaluation Derived from Water Pollution Abatement	1-F3-WP-26,102-01 2-F3-WP-26,102-02	9,300 500** 9,720 500**

* Active 1966 - Supported by funds awarded in previous years
** Supply, travel, or dependent allowance

LOCATION AND RECIPIENT	PROJECT TITLE	NUMBER	AMOUNT
CALIFORNIA			
Stanford University Stanford			
Hill, David W. Dept. of Civil Engineering	Distribution and Degradation of Pesticides in Water	5-F1-WP-20,280-04	$6,600
Huff, Dale Dept. of Civil Engineering	Rainfall Deposition of Radioactive Fallout in Water Supplies	5-F1-WP-26,022-02	5,800
Jewell, William Dept. of Civil Engineering	Algal Degradation in Waterways	1-F1-WP-33,693-01	5,100
Linstedt, Kermit D. Dept. of Civil Engineering	Tracer Studies of Vanadium in Water Treatment	5-F1-WP-22,084-03	5,600
Nemerow, Nelson L. Dept. of Civil Engineering	Economics of Water Resources and Waste Treatment	1-F3-WP-26,118-01	9,524 300**
O'Rourke, James T. Dept. of Civil Engineering	Effects of Temperature Variation on Anaerobic Digestion	5-F1-WP-26,010-02	7,600
Steele, Timothy D. Dept. of Civil Engineering	Computer Model for Water Chemistry of Natural Streams	1-F1-WP-33,657-01	5,600
Stratton, Frank E. Dept. of Civil Engineering	Nitrogen Effects on Oxygen Resources in Streams	5-F1-WP-20,354-03	6,100
Tchobanoglous, George Dept. of Civil Engineering	Spray Irrigation as a Means of Effluent Disposal	5-F1-WP-22,439-03	7,100
Young, James C. Dept. of Civil Engineering	Biological Denitrification in Aerobic Environment	1-F1-WP-28,715-01	6,600
University of California Davis			
Carlson, John S. Dept. of Zoology	Effects of Micro-Nutrients on Primary Production Organisms	5-F1-WP-21,612-03	3,650
COLORADO			
Colorado State University Fort Collins			
Bittinger, Morton W. Dept. of Civil Engineering	Movement of Viruses through Soil as Related to Saturation	4-F3-WP-23,699-02	1,300

** Supply, travel, or dependent allowance

LOCATION AND RECIPIENT	PROJECT TITLE	NUMBER	AMOUNT
COLORADO (cont.)			
Colorado State University Fort Collins			
Hendricks, Charles W. Dept. of Pathology and Microbiology	Growth of Selected Enteric Bacteria in River Water	5-F1-WP-22,545-03	$6,800
Wendt, Theodore M. Dept. of Microbiology	Urease Positive Bacteria and their Relation to Water Pollution	1-F1-WP-26,114-01A1	5,600
University of Colorado Boulder			
Bryce, George W., Jr. Dept. of Biology	Distribution and Ecology of Colorado Molluska	1-F1-WP-24,810-01	____*
LaVelle, James W. Dept. of Biology	Primary Productivity of the Arkansas River in the Vicinity of Pueblo, Colorado	5-F1-WP-26,101-02	7,600
Young, Willard C. Dept. of Biology	The Hydracarina of Colorado and their Distribution as Related to Altitude and Water Chemistry	1-F1-WP-26,062-01	6,675
GEORGIA			
Georgia Institute of Technology Atlanta			
Mullins, Bart C. Dept. of Civil Engineering	Development of Probabilistic Estimate of Streamflow Regimes	1-F1-WP-24,383-01	____*
University of Georgia Athens			
Cooke, George D. Dept. of Zoology	A Study of Eco-Energetics on a Pond Ecosystem Utilizing a Pesticide Tracer	1-F2-WP-29,492-01	6,369 300**
Mayberry, William R. Dept. of Bacteriology	Gas-Liquid Chromatographic Studies of Biodegradation of Detergents	5-F1-WP-21,658-03	5,300
Todd, Russell L. Dept. of Bacteriology	Bacterial Decomposition of Detergents in Sewage	5-F1-WP-21,402-03	5,600

* Active 1966 - Supported by funds awarded in previous years
** Supply, travel or dependent allowance

LOCATION AND RECIPIENT	PROJECT TITLE	NUMBER	AMOUNT
IDAHO			
University of Idaho Moscow			
Smith, Stanford D. Dept. of Entomology	Faunal and Ecological Studies in the Trichiptera of Idaho	5-F1-WP-26,026-03	$3,150
ILLINOIS			
Northwestern University Evanston			
Smith, Frank A. Dept. of Economics	Economic Aspects of Water Pollution Abatement in the Pulp and Paper Industry	1-F1-WP-26,109-01	6,864
University of Illinois Urbana			
Dick, Richard Dept. of Civil Engineering	Biological Aspects of Water Pollution Control	1-F1-WP-21,613-02	____*
Hall, Millard W. Dept. of Civil Engineering	Inorganic Phosphorus Removal by the Activated Sludge Process	5-F1-WP-21,616-03	6,800
Parsha, Edward R. Dept. of Civil Engineering	A Study of Factors Influencing the Flocculation of Dispersed Activated Sludge Cultures	4-F1-WP-21,618-03	2,505
INDIANA			
Purdue University West Lafayette			
Schaumburg, Frank D. Dept. of Sanitary Engineering	Simulated Mixed Culture Research	5-F1-WP-22,348-02	2,517
Woodard, Franklin E. Dept. of Sanitary Engineering	Coacervation and Chemical Coagulation of Lignin from Pulp Mill Black Liquor	5-F1-WP-16,465-03	____*
IOWA			
Iowa State University Ames			
Bridges, Harold R. Dept. of Civil Engineering	Research Problem to be Selected	1-F1-WP-26,104-01	4,900

* Active 1966 - Supported by funds awarded in previous years

LOCATION AND RECIPIENT	PROJECT TITLE	NUMBER	AMOUNT
IOWA (cont.)			
Iowa State University Ames			
Burns, Donald E. Dept. of Civil Engineering	Removal of Particulate Matter on Coated Filter Media	5-F1-WP-26,003-02	$6,600
Dillingham, James H. Dept. of Civil Engineering	Computer Applications in Water Filtration Plant Design	5-F1-WP-20,084-03	____*
Fox, Martin D. Dept. of Civil Engineering	Sand Filtration Research	1-F1-WP-23,211-01	____*
Hermanson, Ronald E. Dept. of Agricultural Engineering	Groundwater Pollution Potential from Land Disposal and Lagooning of Farm Wastes	5-F1-WP-23,671-02	6,600
Merideth, Kenneth C. Dept. of Civil Engineering	Research Problem to be Selected	5-F1-WP-24,354-02	6,100
Raschke, Ronald L. Dept. of Botany	Algal Productivity and Waste Reclamation in a Sewage Stabilization Pond	1-F1-WP-26,064-01	6,648
State University of Iowa Iowa City			
Lampe, Wallace D. Dept. of Civil Engineering	Oxygen Utilization in Activated Sludge Systems	1-F1-WP-33,656-01	5,100
Teasdale, John D. Dept. of Civil Engineering	Virus Movement through Porous Media	5-F1-WP-22,430-02	5,800
KANSAS			
University of Kansas Lawrence			
Burkhead, Carl E. Dept. of Civil Engineering	Energy Relationships in Aerobic Metabolism	5-F1-WP-21,611-03	6,800
Stukenburg, John R. Dept. of Civil Engineering	Radiotracer Studies of Endogenous Metabolism	5-F1-WP-24,278-02	5,100
KENTUCKY			
University of Kentucky Lexington			
Mills, Kermit C. Dept. of Agricultural Engineering	Effects of Steer Rations on Biological Stabilization Rates	1-F1-WP-22,429-01	____*

* Active 1966 - Supported by funds awarded in previous years

LOCATION AND RECIPIENT	PROJECT TITLE	NUMBER	AMOUNT
KENTUCKY (cont.)			
University of Louisville Louisville			
Greeson, Phillip E. Dept. of Biology	The Major Sources of Dissolved Oxygen in the Aquatic Environment	5-F1-WP-26,036-02	$5,800
MARYLAND			
The Johns Hopkins University Baltimore			
Schubel, Jerry R. Dept. of Oceanography	Marine and Estuarine Sedimentation Processes	5-F1-WP-23,785-02	6,600
Warriner, Thomas R. Dept. of Sanitary Engineering	Studies of the Effects of Sewage Treatment on the Survival of Pathogens	5-F1-WP-16,922-03	____*
University of Maryland College Park			
McErlean, Andrew J. Dept. of Zoology	Heat Stress and Thyroidal Relationships in Roccus americanus	2-F3-WP-24,146-02	6,905
MASSACHUSETTS			
Harvard University Cambridge			
Schaake, John C. Dept. of Environmental Sciences and Engineering	Economic Aspects of Water Management	1-F2-WP-26,108-01	7,330 500**
Massachusetts Institute of Technology Cambridge			
Clark, Robert C. Dept. of Geology and Geophysics	Hydrocarbons in the Marine Environment	5-F1-WP-24,325-02	4,450
Matson, Wayne R. Dept. of Chemistry	Dynamics of Lead and Related Trace Elements in Natural Media	1-F1-WP-31,180-01	5,600

* Active 1966 - Supported by funds awarded in previous years
** Supply, travel or dependent allowance

LOCATION AND RECIPIENT	PROJECT TITLE	NUMBER	AMOUNT
MICHIGAN			
Central Michigan University Mt. Pleasant			
Houston, William A. Dept. of Biology	Studies of the Phytoplankton of Torch, Skegemog, and Elk Lakes	1-F1-WP-26,032-01	$____*
Knutio, Arthur L. Dept. of Biology	Taxonomic Key for Chironomidae Larvae by Cytologic Distinction of Salivary Glands	5-F1-WP-23,238-02	____*
Michigan State University East Lansing			
Bahr, Thomas G. Dept. of Fisheries and Wildlife	Effects of Sub-lethal Pesticide Stress upon Fish	5-F1-WP-26,004-03	3,800
Carton, Ronald R. Dept. of Fisheries and Wildlife	Effects of Sub-Acute Metallic Ion Pollution on Ecology	5-F1-WP-26,008-03	3,600
Jackson, Dennis Dept. of Botany and Plant Pathology	The Taxonomy and Ecological Distribution of the Desmidiaceae in Montana	1-F1-WP-26,081-01A1	6,300
Janssen, Alvin L. Dept. of Fisheries and Wildlife	Effects of Pollution on the Energy Transfer in a Stream Ecosystem	1-F1-WP-26,154-01	5,100
Lemon, Herbert L. Dept. of Fisheries and Wildlife	Transfer of the Insecticide Dieldrin through Trophic Levels	5-F1-WP-29,109-02	5,600
Linton, Kenneth J. Dept. of Fisheries and Wildlife	Electrophoretic Analysis of Serum Proteins as an Indicator of Pollution	4-F1-WP-13,866-04	____*
Sobocki, Leonard P. Dept. of Fisheries and Wildlife	Movement of Sodium Arsenite in a Pond Ecosystem	5-F1-WP-25,711-02	7,100
University of Michigan Ann Arbor			
Brockway, Donald L. Dept. of Fisheries and Wildlife	Release Effects of Tissue-Stored Dieldrin on Fishes	1-F1-WP-34,286-01	6,800
Foess, Gerald W. Dept. of Civil Engineering	Research Problem to be Selected	5-F1-WP-26,036-02	5,600
Hirota, Dennis I. Dept. of Civil Engineering	Chemical Oxidation of Domestic Wastes	5-F1-WP-26,095-02	5,300

* Active 1966 - Supported by funds awarded in previous years

LOCATION AND RECIPIENT	PROJECT TITLE	NUMBER	AMOUNT
MICHIGAN (cont.)			
University of Michigan Ann Arbor			
Keinath, Thomas M. Dept. of Civil Engineering	Kinetics of Adsorption on Fluidized Carbon	5-F1-WP-24,505-02	$5,600
Robohn, Walter F. Dept. of Environmental Health	Water Resources Allocation in the Neosho Grand Basin	5-F3-WP-16,345-02	____*
Schenk, John E. Dept. of Civil Engineering	Silica Interaction with Trace Metals	5-F1-WP-26,034-02	6,100
MISSOURI			
University of Missouri Columbia			
Hemphill, Louis Dept. of Civil Engineering	Application of Thermal Technique for Detecting Organic Pollution	5-F1-WP-26,007-02	6,800
Hoehn, Robert C. Dept. of Civil Engineering	Research Problem to be Selected	1-F1-WP-26,150-01	6,138
Lind, Owen J. Dept. of Zoology	Productivity Measurements in Lakes Recovering from Acid Pollution	5-F1-WP-22,892-02	____*
Washington University St. Louis			
Brower, George R. Dept. of Environmental and Sanitary Engineering	Degradation of Organic Pesticides in Water	5-F1-WP-21,609-03	____*
Buzzell, James C. Dept. of Environmental and Sanitary Engineering	Chemical Oxidation of Trace Organics in Water	5-F1-WP-22,366-02	____*
Young, Reginald H. F. Dept. of Environmental and Sanitary Engineering	Degradation of Trace Organic Pollutants	5-F1-WP-26,027-02	6,800
NEW MEXICO			
New Mexico State University University Park			
O'Brien, Walter J. Dept. of Civil Engineering	Continuous Biochemical Monitoring of Some Organic Wastes	5-F1-WP-22,185-02	____*

* Active 1966 - Supported by funds awarded in previous years

LOCATION AND RECIPIENT	PROJECT TITLE	NUMBER	AMOUNT
NEW YORK			
Cornell University Ithaca			
Kirby, William H. Dept. of Sanitary Engineering	Research Problem to be Selected	5-F1-WP-24,561-02	$6,100
Liebman, Jon C. Dept. of Sanitary Engineering	Systems Analysis at a Water Resource Basin	1-F1-WP-20,553-01A1	____*
Maier, Walter J. Dept. of Sanitary Engineering	Mass Transfer and Biological Oxidation Kinetics	5-F1-WP-24,563-02	____*
Ward, Charles R. Dept. of Entomology and Limnology	Ecological Changes in Modified Playas	5-F1-WP-15,212-04	6,600
New York University University Heights			
Bella, David A. Dept. of Civil Engineering	Dispersal of Pollutants in Rivers and Estuaries	5-F1-WP-26,038-02	5,600
Dresnack, Robert Dept. of Civil Engineering	Statistical Relationship between Watershed Yield and Storage Capacity	1-F1-WP-25,057-01	____*
Metzger, Ivan Dept. of Civil Engineering	Mathematical Methods for Sanitary Engineering Applications	1-F3-WP-26,053-01	12,510 500**
Rensselaer Polytechnic Institute Troy			
Stiefel, Robert C. Dept. of Civil Engineering	Oxygen Transfer and Uptake Rates in a Pure Oxygen Environment	1-F1-WP-24,565-01	____*
NORTH CAROLINA			
University of North Carolina Chapel Hill			
Gakstatter, Jack H. Dept. of Environmental Science and Engineering	The Accumulation and Excretion of DDT and Dieldrin by Fish	5-F1-WP-21,673-03	7,300
Henderson, Oliver Dept. of Environmental Science and Engineering	Microfloatation of Algae	2-F1-WP-21,608-03	6,800

* Active 1966 - Supported by funds awarded in previous years
** Supply, travel or dependent allowance

LOCATION AND RECIPIENT	PROJECT TITLE	NUMBER	AMOUNT
OHIO			
Ohio State University Columbus			
Kucha, Michael J. School of Law	Law in the Field of Water Quality and Water Resources	5-F3-WP-26,033-02	$3,720
OKLAHOMA			
Oklahoma State University Stillwater			
Baumgardner, Ray K. Dept. of Zoology	Primary Productivity of a Stream Receiving Oil Refinery Effluents	1-F1-WP-24,517-01	____*
Ewing, Margaret S. Dept. of Zoology	Plankton Diversity Changes in Organic Enrichment	5-F1-WP-21,296-03A1	____*
Grady, C. P. Leslie Dept. of Civil Engineering	Predominance and Symbiosis in Mixed Activated Sludge Cultures	2-F1-WP-16,744-02	5,641
Harrel, Richard C. Dept. of Zoology	Stream Order and Distribution of Benthic Invertebrates	5-F1-WP-23,074-02	7,300
Knudson, Vernie A. Dept. of Zoology	Dehydrogenase Concentration to Estimate a Functioning Biomass	5-F1-WP-26,087-02	7,300
University of Oklahoma Norman			
Davis, Ernst M. Dept. of Civil Engineering	Phosphate Assimilation by Specific Types of Bio-Oxidation Lagoon Algae	5-F1-WP-25,155-02	5,800
OREGON			
Oregon State University Corvallis			
Haertel, Lois S. Dept. of Oceanography	Relationships between Columbia River Estuary Plankton, Radionuclides, and Wood Fibers	1-F1-WP-31,471-01	5,100
Holton, Robert L. Dept. of Oceanography	Radiosensitivity of Marine Organisms	5-F1-WP-30,166-02	7,300

* Active 1966 - Supported by funds awarded in previous years

LOCATION AND RECIPIENT	PROJECT TITLE	NUMBER	AMOUNT
OREGON (cont.)			
Oregon State University Corvallis			
McCain, Bruce B. Dept. of Microbiology	Characterization of Viruses Infections for Salmonid Cell Cultures	1-F1-WP-26,157-01	$5,600
Reese, Weldon H. Dept. of Botany	Ecological Studies of an Experimental Stream	1-F1-WP-26,043-01	____*
Robertson, James M. Dept. of Microbiology	A Physiological Ecological Study of Sphaerotilus Natans in an Experimental Stream	5-F1-WP-26,040-02	6,800
Seabloom, Robert W. Dept. of Civil Engineering	Influence of Impoundments on Water Quality	1-F3-WP-25,459-01A1	8,585 500**
PENNSYLVANIA			
Lehigh University Bethlehem			
Hertz, Eleanor W. Dept. of Biology	Investigation of Metabolic and Cellular Changes in Fish Tissue Culture Due to Toxic Material Such as Cyanide	5-F1-WP-19,126-03	____*
Pennsylvania State University University Park			
Eberhardt, William A. Dept. of Civil Engineering	Dehydrogenase Activity as a Measure of the Active Mass of Activated Sludge	5-F1-WP-26,021-02	6,100
RHODE ISLAND			
University of Rhode Island Kingston			
Busser, John H. Dept. of Oceanography	Physiological Indices of Pollution in Marine or Estuarine Waters	2-F3-WP-17,280-04	9,855 500**

* Active 1966 - Supported by funds awarded in previous years
** Supply, travel or dependent allowance

LOCATION AND RECIPIENT	PROJECT TITLE	NUMBER	AMOUNT
SOUTH CAROLINA			
Clemson University Clemson			
Cannella, Albert A. Dept. of Sanitary Engineering	Chemical Aspects of Waste Treatment	1-F1-WP-30,617-01	$9,127
Click, Clifford N. Dept. of Chemical Engineering	Kinetics and Thermodynamics of Continuous Flow Algal Systems	1-F1-WP-29.884-01	7,145
Crocker, James D. Dept. of Civil Engineering	Anaerobic Methane Fermentation of Waste	1-F1-WP-26,047-01	____*
Earle, Elias P. Dept. of Chemical Engineering	Physical Properties of Microbiological Suspension	5-F1-WP-24,431-02	1,509
Holland, Lyman L. Dept. of Chemical Engineering	Growth Kinetics of Algae in a Photosynthetic Reactor	1-F1-WP-26,173-01	5,100
Kornegay, Billy H. Dept. of Civil Engineering	A Rational Mathematical Model for Trickling Filters	5-F1-WP-24,560-02 5-F1-WP-24,560-03	6,800 3,400
Watson, Jerry E. Depts. of Bacteriology and Civil Engineering	Microbiological Decomposition of Sulfonated Lignin	1-F1-WP-25,393-01	____*
Wrenn, John D. Dept. of Chemical Engineering	Effect of Light Source on Chlorophyll in Algae	1-F1-WP-26,181-01	5,600
TENNESSEE			
University of Tennessee Knoxville			
Bergquist, Eugene T. Dept. of Botany	Ecological and Morphogenetic Studies of Myriophyllum	5-F1-WP-21,877-03	6,034
Vanderbilt University Nashville			
Tomlinson, Henry D. Dept. of Civil and Water Resources Engineering	Effect of Trace Organic Compounds on the Kinetics of Manganese Formation in Reservoirs	1-F1-WP-26,148-01	7,100
TEXAS			
Texas A & M University College Station			
Evett, Jack Dept. of Civil Engineering	Evaluation of the Waste Assimilation Capacity in a River with Daily Variation in Flow	7-F1-WP-23,068-02	5,185

* Active 1966 - Supported by funds awarded in previous years

LOCATION AND RECIPIENT	PROJECT TITLE	NUMBER	AMOUNT
TEXAS (cont.)			
Texas Technological College Lubbock			
Forehand, Charles E. Dept. of Horticulture	Insecticide Use and Effects on Insect Populations, Water Contamination and Playa Lake Beds	5-F1-WP-23,235-02	$____*
University of Texas Austin			
Miholits, Ernest M. Dept. of Civil Engineering	Tracer Studies in Amino Acid Metabolism in Anaerobic Digestion	1-F1-WP-26,073-01	____*
UTAH			
University of Utah Salt Lake City			
Gaufin, Richard F. Dept. of Zoology and Entomology	Uptake of Radioactively Tagged Insecticides by Aquatic Invertebrates	5-F1-WP-26,051-02	6,300
Hales, Donald C. Dept. of Zoology and Entomology	Effects of DDT on a Stream Environment	5-F1-WP-26,025-02	7,600
Jensen, Loren D. Dept. of Zoology and Entomology	Long-term Effects of Organic Insecticides on Stonefly Naiads	1-F1-WP-26,029-01	____*
Merkley, Wayne B. Dept. of Zoology and Entomology	Evaluation of Nematodes in Water Treatment Plant	5-F1-WP-26,016-02	6,600
Prows, Bernard L. Dept. of Zoology and Entomology	Bioassays to Determine the Toxicity of Pesticides to Aquatic Insects	1-F1-WP-26,130-01	8,127
Warnick, Stephen L. Dept. of Zoology and Entomology	The Fate of Insecticides in Water	5-F1-WP-20,175-03	____*
Utah State University Logan			
Hilden, Donald A. Dept. of Wildlife Resources	Toxicity and Interactions of Mg, Ca, and Halides on Trout	5-F1-WP-22,891-03	5,800

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LOCATION AND RECIPIENT	PROJECT TITLE	NUMBER	AMOUNT
UTAH (cont.)			
Utah State University Logan			
Nyquist, David Dept. of Wildlife Resources	Eutrophication Trends of Bear Lake (Idaho-Utah) and Effect on the Distribution and Biological-Productivity of Zooplankton	5-F1-WP-23,240-03	$5,300
VIRGINIA			
Virginia Polytechnic Institute Blacksburg			
Blackwell, Richard L. Dept. of Civil Engineering	Coagulation of Waste Streams with Solvents	1-F1-WP-26,019-01	____*
Harrison, John Dept. of Civil Engineering	Dewatering of Sewage Sludge by Syneresis	5-F1-WP-21,999-03	5,800
Judkins, Joseph F. Dept. of Civil Engineering	Crystal Seeding for Control of Sludge Properties	5-F1-WP-23,213-03	6,800
Womeldorph, Donald E. Dept. of Statistics	Study of Models to Correct for Particle Size in X-Ray Fluorescence Analysis of Multicomponent Mixtures	5-F1-WP-23,900-02	____*
WASHINGTON			
University of Washington Seattle			
Stockner, John G. Dept. of Zoology	Ecology of Thermal Springs	5-F1-WP-26,042-02	6,600
Whitmore, Cecil M. College of Fisheries	Insecticide-Induced Changes in Rainbow Trout and Pacific Salmon	1-F1-WP-26,041-01	____*
Woelke, Charles E. College of Fisheries	Bioassay Study of Fertilized Oyster Eggs in Puget Sound	5-F1-WP-26,014-02	6,600
WISCONSIN			
University of Wisconsin Madison			
Baillod, Charles R. Dept. of Civil Engineering	Kinetics of Nitrification in Activated Sludge	1-F1-WP-24,612-01A1	6,100

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LOCATION AND RECIPIENT	PROJECT TITLE	NUMBER	AMOUNT
WISCONSIN (cont.)			
University of Wisconsin Madison			
Biggar, James W. Dept. of Soils	Mixing Processes in Soil in Relation to Waste Control	1-F1-WP-28,715-01	$5,443 500**
Boucher, Francis R. Dept. of Civil Engineering	Chemistry of Chlorinated Organic Pesticides in Surface and Ground Waters	1-F1-WP-26,137-01	6,100
Brezonik, Patrick L. Dept. of Civil Engineering	Chemistry of Nitrogen in Natural Waters	5-F1-WP-26,103-02	2,900
Carlson, Robert F. Dept. of Civil Engineering	Development of a Dynamic Model of the Hydrologic Cycle	5-F1-WP-24,678-02	____*
Cole, Jon A. Dept. of Civil Engineering	General Area of Physical Thickening of Sludges from Biological Waste Treatment	5-F1-WP-28,270-02	7,600
Doll, Frederick L. Dept. of Civil Engineering	Use of Freeze Concentration for Trace Organics Analysis	5-F1-WP-26,009-02	6,600
Fruh, Erwin G. Dept. of Civil Engineering	Comprehensive Study on Eutrophication of Lakes in the Yahara River Basin	1-F2-WP-16,455-01	____*
Karr, Malcolm H. Dept. of Urban and Regional Planning	Water Resources Management	1-F3-WP-26,167-01	12,705
Knopp, Paul V. Dept. of Hydraulics and Sanitary Laboratory	Unsteady State Conditions and their Effect on Biological Treatment Processes	1-F1-WP-25,034-01	____*
Mueller, James A. Dept. of Civil Engineering	Phosphate Removal from Waste Water	5-F1-WP-24,564-02	____*
Peterson, James O. Dept. of Civil Engineering and Water Chemistry	Concentration of Organics	1-F1-WP-26,183-01	5,600
Radke, Rodney O. Dept. of Soils	Adsorption of S-Triazine Herbicides at Soil Colloidal Surfaces	5-F1-WP-24,110-03	5,300
Shannon, James E. Dept. of Civil Engineering	Chemistry of Metals in Natural Waters	5-F1-WP-26,012-02	____*

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LOCATION AND RECIPIENT	PROJECT TITLE	NUMBER	AMOUNT
WISCONSIN (cont.)			
University of Wisconsin Madison			
Smith, Sharon G. Dept. of Zoology	Energy Flow through a Population of Ciliate Protozoans in a Lake Community	1-F2-WP-8676-01	$5,146
Spear, Richard D. Dept. of Hydraulic and Sanitary Laboratory	Chemistry of Glycollic Acid in Natural Waters	5-F1-WP-26,020-02	6,100
Uttormark, Paul D. Dept. of Civil Engineering	Langmuir Circulation in Lakes	5-F1-WP-24,470-03	6,800
Voelkel, Karl G. Dept. of Civil Engineering	Hydraulic Analysis of Aerated Grit Chambers	1-F1-WP-26,088-01	6,600
Walesh, Stuart G. Dept. of Civil Engineering	Subsurface Water Movement	5-F1-WP-26,072-02	6,600
FOREIGN			
ENGLAND			
Ministry of Agriculture Lowestaft			
Jones, Albert C. Dept. of Fisheries and Food	Population Dynamics of Mixed-Species Fisheries	1-F3-WP-22,546-01	____*
University College London			
Okun, Daniel A. Dept. of Civil Engineering	Implementation of Water Research into Works Design	1-F3-WP-26,147-01	13,123 500**
University of Leeds Leeds			
Markham, James J. Dept. of Chemistry	Synergistic Effects of Complexing Agents in Water Purification by Solvent Extraction	1-F3-WP-26,091-01	____*

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LOCATION AND RECIPIENT	PROJECT TITLE	NUMBER	AMOUNT
FOREIGN (cont.)			
ISRAEL			
Hebrew University Jerusalem			
Rosen, Milton J. Dept. of Physical Chemistry	Application of Surface Active Agents to Water Supply Problems	1-F3-WP-23,055-01	$____*
SWITZERLAND			
Swiss Federal Institute of Technology Zurich			
Clesceri, Lenora S. Dept. of Sanitary Engineering	Growth of Nitrifying Bacteria as Related to Microbial Denitrification of Sewage Effluents	5-F2-WP-10,712-02	____*
Clesceri, Nicholas L. Dept. of Sanitary Engineering	Degradation of Condensed Phosphates during Sewage Treatment and in Receiving Waters	5-F2-WP-10,713-02	____*
WALES			
University College of Swansea Swansea			
Swilley, Eugene L. Dept. of Chemical Engineering	Transport Phenomena in Biochemical Oxidation Systems Numerical and Physical Models	1-F2-WP-24,131-01A1	500**

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